AMATEUR RADIO

VOL. 51, NO. 8 AUGUST 1983

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JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

Computer Programme for Logs & QSLs

WIA Reps visit NZART Conference

Presidential Comment: 30% Tariff Duty

Concluding: Military Radios — The C11

Erect a Simple Ground Plane

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First Amateur Radio in Space

BBC World Service

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0909

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NEWS ABOUT BRITAIN
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0600

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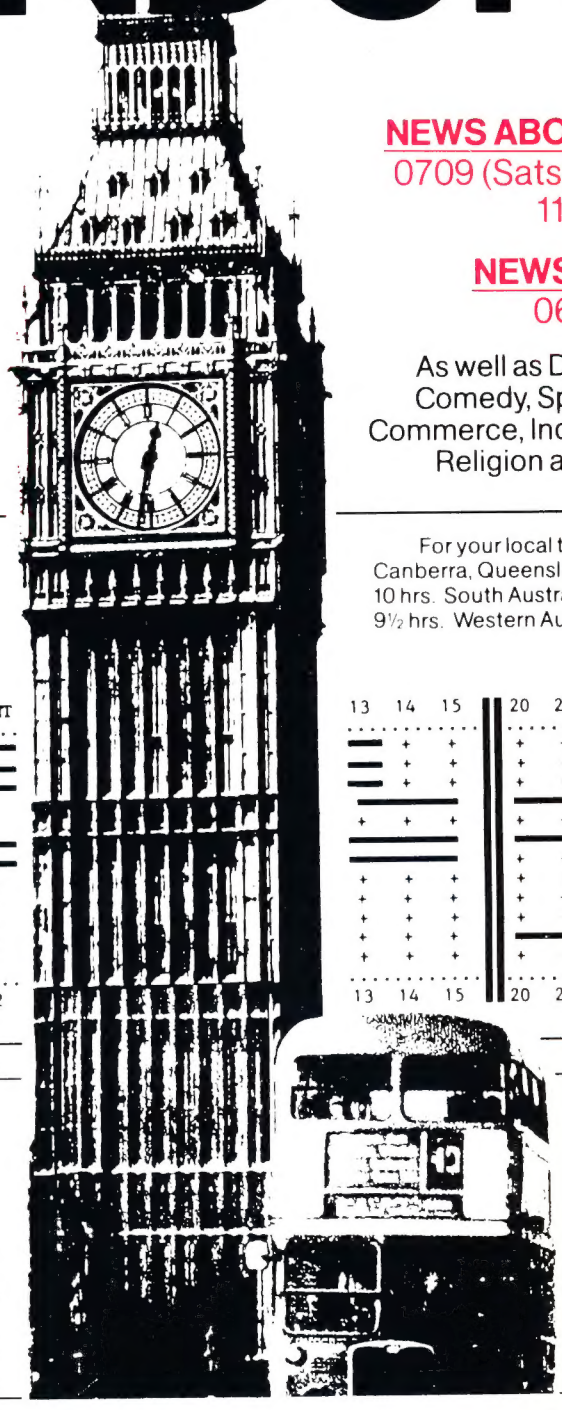

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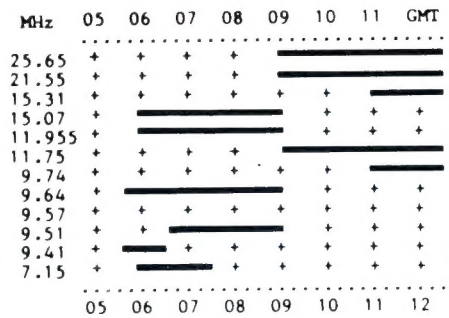

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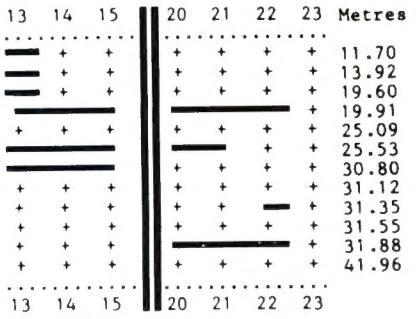

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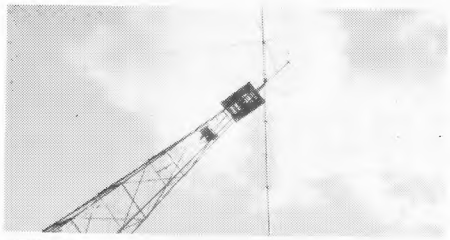

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14 MHz 6 element quad on a 15 metre boom at 27.5 metres high situated at Mandurang near Bendigo. by N Stillwell, VK3ACN.

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All copy for October AR must reach PO Box 300, Caulfield South, 3162 no later than 25th August.

EDITOR
GIL SONES* VK3AUI

TECHNICAL EDITORS
RON COOK* VK3AFW
PETER GAMBLE * VK3YRP
EVAN JARMAN* VK3ANI
BILL RICE* VK3ABP

CONTRIBUTING EDITORS
MIKE BAZELY VK6HD
RON COOK* VK3AFW
REG DWYER VK1BR
BRENDA EDMUNDS VK3KT
MARSHALL EMMS VK5FN
RON FISHER* VK3OM
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Enquiries and material to:
The Editor
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Acknowledgement may not be made unless specially requested. All important items should be sent by certified mail. The editor reserves the right to edit all material, including Letters to the Editor and Hamads, and reserves the right to refuse acceptance of any material, without specifying a reason.

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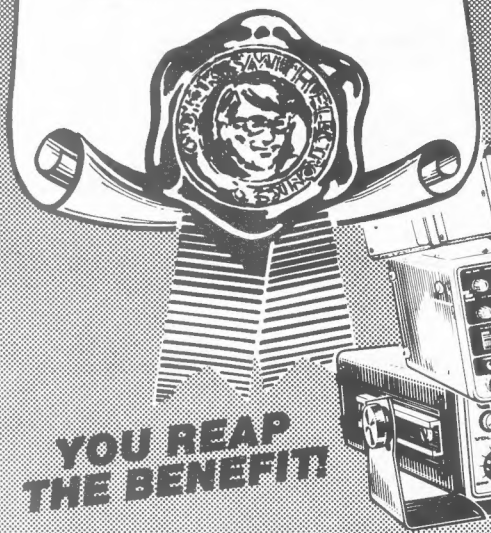

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- 13.5V DC operation: take it anywhere (great mobile/emergency set!)
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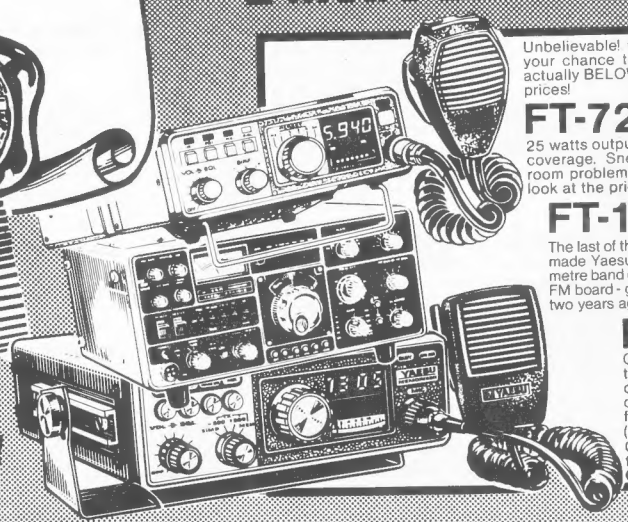

Unbelievable! If you want a top quality Yaesu transceiver here's your chance to grab a real bargain! Last few left in stock are actually BELOW COST! Hurry - they won't last long at these crazy prices!

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NOW $699

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Match your FT-707 into just about anything - even a piece of wet string! Complete with superb power & SWR meter, push-button operation and just plugs in to your 707 for power, Fantastic value (use with other rigs, too!) but once again - be warned: Extremely limited stock. Your local store may even have to order one for you. But it's worth it !
Cat D-2875

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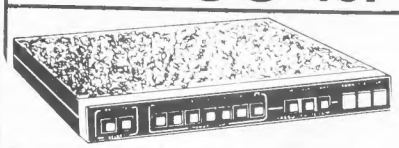

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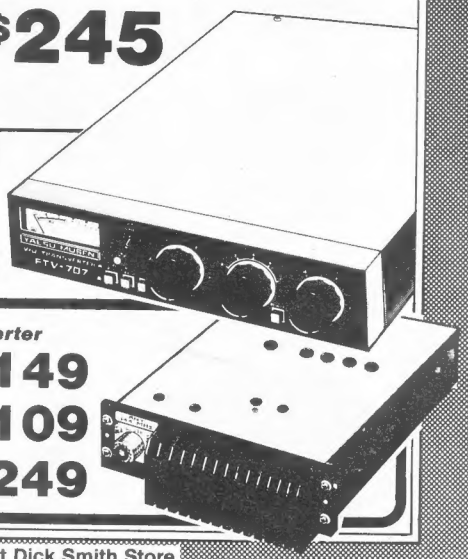

MODULES *for above transverter*

2 Metre Module Cat D-2877 **$149**

6 Metre Module Cat D-2878 **$109**

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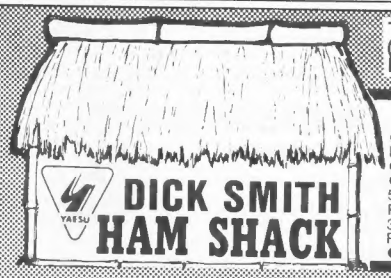

The above products may all be ordered through your nearest Dick Smith Store (while stocks last!). However, most of the 'Ham Shack' stores listed below may have the items actually in stock: ring them on the number shown to check!

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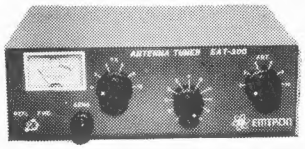
EMTRON EAT-300
EXCITING NEW ANTENNA TUNER



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- **Negligible insertion loss of 0.25dB**
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EAT-301 THE NEW ANTENNA TUNER
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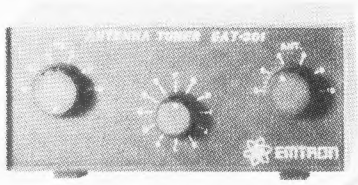

This tuner has same specifications as EAT-300, but no SWR bridge, 160m band coverage and 4:1 balun.

COAXIAL SWITCHES

TOYO SA-460, 2pos, 2kW, 500MHz	$26
WELZ CH-20A, 2pos, 2kW, 900MHz	$39
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IC-4E	$320
IC-26A	$395
IC-290H	$617

KENWOOD:

TS-430S	POA

JRC:

JST-100	$2245

AZDEN: At before "DUTY" prices

PCS-300	$379
DCS-4000	$479

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Drake-R7A	$2300
ICOM-ICR 70	$799
Kenwood-R2000	$650
MARC-NR 82F1 12band SW	$340

RF AMPLIFIERS

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6M3-60P, 6m, 50W	$239
2M4-40P, 2m 40W	$149
2M10-80P, 2m, 80W	$249
2M25-150, 2m, 150W	$359

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HL-90U, 70cm, 90W	$369
HL-45U, 70cm, 45W	$239
HL-160V, 2m, 160W	$399
HL-82V, 2m, 80W	$245
HL-86V, 6m, 80W	$210

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HB-34D 4el, 3 band beam	$359
HB-35C 5el, 3 band beam	$439
MV-5BH 5 band vertical	$179
MV-3BHR 3 band vertical	$145
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TE11F5J 5el, 11m broad band beam	$159

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KR-2000RC heavy duty rotator	$459
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8 core rotator cable	$0.95/metre

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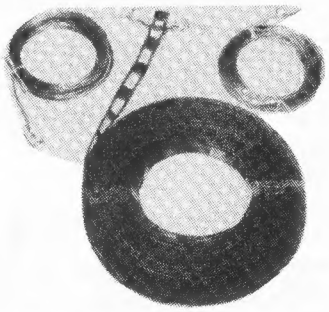

The perfect match for your Emtron EAT-300 antenna tuner. Covers 160-10m, handles 2kW PEP and comes completely assembled without any efficiency robbing traps.

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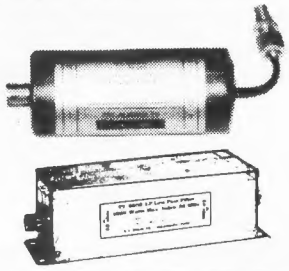
DRAKE: TV 3300 LP filter	$45
MONITOR TV: HP30 HP filter	$29



VALVES

572B	$89
3-500Z	$199
4:1000A	POA
6146B RCA	$24
6146W RCA	$29
6J86C	$14
6KD6	$15
8950	$23
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12BY7	$6.50
6GK6	$6.50

ANTENNA BALUNS

KAUFMAN, 1:1, 2kW for dipoles	$29
HOKUSHIN HS-50B, 1:1, 2kW for dipoles	$32
WELZ DP-BU5/BU7, 1:1, 2kW for beams	$32
SCALAR 4:1, 2kW for beams & dipoles	$49
SCALAR 1:1, 2kW for beams & dipoles	$49
EMTRON EBL 300 4:1 300W for ant tuners	$19
EMTRON EBL 1000 4:1, 1000W for ant tuners	$33
EMTRON EBL 2000 4:1, 2000W for ant tuners	$44

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TOYO T100, 100W, 200MHz	$69
TOYO T200, 200W, 200MHz	$89
WELZ CT15A, 15W, 450MHz	$22
WELZ CT15N, 15W, 450MHz	$29
WELZ CT150, 150W, 450MHz	$85
WELZ CT300, 300W, 250MHz	$110

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AKIGAWA PM-2H	$69
AKIGAWA PM-5H	$49
AKIGAWA APM-1V, VHF peak power, SWR	$89
TOYO T-430 UHF SWR meter	$85
WELZ SP-350, 1.8-500MHz, 2 sensors	$119
WELZ SP-250, 1.6-60MHz, 20,200,2000W	$99

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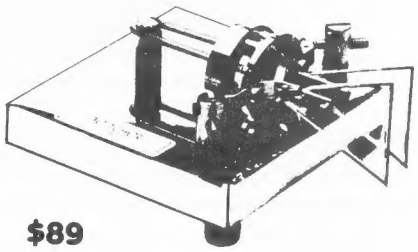

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- Precision-machined, chrome plated brass frames
- Standard model has black textured finish base: deluxe model is chrome plated
- Heavy steel base, non-skid feet

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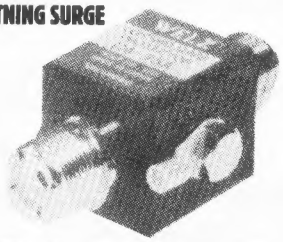
$29



TRANSMITTING TYPE VARIABLE CAPACITORS
for high power R.F amplifiers and antenna tuners

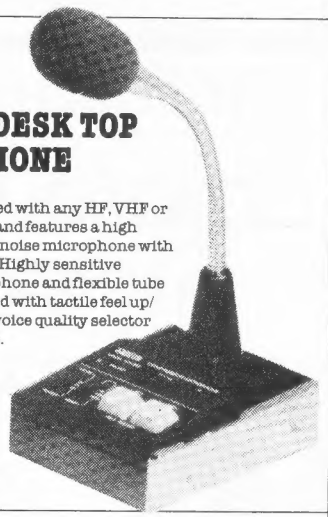
ECC 32-208, 210pF, 1000V for tuners	$23
ECC 45-500, 500pF, 2500V for tuners	$65
ECC 88-120, 210pF, 4500V for tuners	$89
ECC 32-800, 800pF loading capacitor	$69
ECC 75-250, 250pF plate capacitor	$67

DATONG MORSE TUTOR
The only way to learn Morse code.

$159

MODEL D-70 MORSETUTOR
Produces random 5 character groups: all letters, all figures or mixed.
Calibrated variable speed (61/2 to 37 WPM) and variable delay (up to 3 secs) between letters for optimum learning efficiency.
Internal loudspeaker, plus personal earpiece for private listening.
Battery operated therefore always ready for use. Current drain is very low for long battery life.

AM-303 DESK TOP MICROPHONE



AM-303 can be used with any HF, VHF or UHF transmitter and features a high performance, low noise microphone with amplifier built in. Highly sensitive condensor microphone and flexible tube employed. Provided with tactile feel up/down switch and voice quality selector switch for FM/SSB.

UNIQUE DESK TYPE MICROPHONE WITH DIGITAL CLOCK DX450

$139

Hi-Class Base Station Microphone
You have DX-450 simultaneously in three ways — the highest class base station microphone, a digital chronometer and an external speaker of clear tonal quality. The pleasant sensation with this 3-in-1 super machine will tell you the AMATEUR life is entering a new age.

ACTIVE RECEIVING ANTENNAS
Model 270 & 370
Ultra compact receiving antenna systems giving wideband coverage from 300kHz to 30 MHz at high sensitivity Models AD270 & AD370 give similar receive performance to large conventional antenna systems yet are only 3 metres in overall length. The balanced dipole configuration also gives good rejection of local interference

AD-270 ..... $189
AD-370 ..... $199

TOROID CORES
All the popular sizes & mixes

IRON POWDER TOROIDS:

CORE SIZE	MIX 2 .5-50 MHz μ = 10	MIX 6 10-90 MHz μ = 8.5	MIX 12 60-200 MHz μ = 4	SIZE OD [in.]	PRICE $
T-200	120			2.00	$6.90
T-106	135			1.06	$2.90
T-80	55	45		.80	$1.80
T-68	57	47	21	.68	$1.70
T-50	51	40	18	.50	$1.50
T-37	42	30	15	.25	$1.40
T-25	34	27	12	.37	$1.20

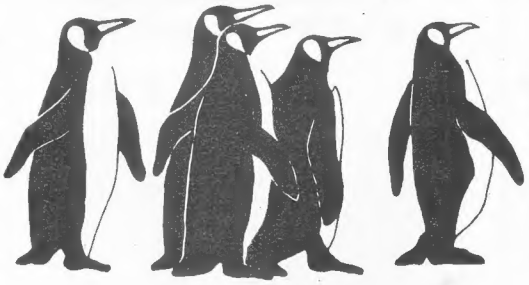
RF FERRITE TOROIDS:

CORE SIZE	MIX Q1 μ = 125 .1-70 MHz	MIX Q8 μ = 40 10-150 MHz	SIZE OD (in.)	PRICE $
F-240	1300	400	2.40	N.A.
F-125	900	300	1.25	$3.80
F-87	600	190	.87	$3.50
F-50	500	190	.50	$2.10
F-37	400	140	.37	$1.50
F-23	190	60	.23	$1.30

Chart shows μH per 100 turns

HEARD ISLAND EXPEDITION 1983
ADVENTURE SOUTH

THE EXPEDITION JOURNAL
A photographic essay and collection of stories recounting the experiences of the Expeditioners on the Island — their successes and disappointments and the beauty and dangers they faced whilst living on this remote wind torn island.
56 pages, over 120 photographs and 25 stories by 10 authors. Limited Edition. Price $6.00 plus $1.00 for postage.



THE EXPEDITION 'T' SHIRT
A graphic design based on the majestic King Penguin. Hand printed by the Expeditioners. Available in all sizes — when ordering, include Australian metric size or chest measurement — for children, specify age.
Bonds Gotcha sweat shirt available with the same design.
'T' Shirts $8.50 plus $1.00 postage
Sweat Shirt $18.50 plus $1.50 postage.

Please send me ..... Tickets to "ADVENTURE SOUTH" — $5.00 Each — $ .....
..... Tickets to "WIND ICE & FIRE" — $2.00 Each — $ .....
..... Copies of the Expedition Journal — $6.00 Each plus $1.00 postage $ .....
Please send me ☐☐ (number) Expedition 'T' SHIRTS Sizes (chest meas) .... $ .....
..... $8.50 (Aust) EACH (Add $1.00 for postage)
Please send me ☐☐ (number) Expedition SWEAT SHIRT Sizes (chest meas) $ .....
..... $18.50 (Aust) EACH (Add $1.50 for postage)
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HEARD ISLAND 1983
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STOP PRESS: IMPORT DUTY SKYROCKETS
HEARD ISLAND 1983
WILL YOU PASS THE AUGUST AOCP?
Find out — New Trial Exams inside

IF YOU HAVEN'T LOOKED AT *amateur radio action*
LATELY, THIS IS WHAT YOU'VE MISSED . . .

- **The Spratly Island incident — in depth.**
- **Yaesu's FT-980 "Computer Cat".**
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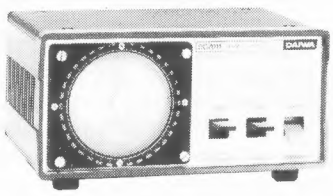
THE CONVENIENCE REVOLUTION.

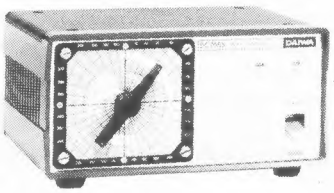
DAIWA

A BRILLIANT LINEUP OF HIGH QUALITY AMATEUR RADIO ACCESSORIES.

ANTENNA ROTATORS



Round controller with world map indicator. **DR7500R, DR7600R.**

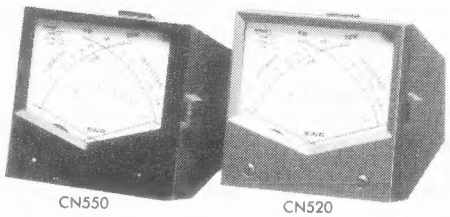


Pre-set controller. **DR7500X, DR7600X.**

Set your antenna with a choice of Daiwa Heavy Duty and Medium Duty Rotators. They'll get you going in the right direction. Type X allows you to pre-set the call area you want and Type R comes with Paddle Switch Control and world map display.

DR7500R Daiwa Ant. Rotator, Medium Duty. **DR7500X** Daiwa Ant. Rotator, Medium Duty, Pre-set. **DR7600R** Daiwa Ant. Rotator, Heavy Duty. **DR7600X** Daiwa Ant. Rotator, Heavy Duty, Pre-set.

SWR/ POWER METERS



CN550 CN520

Hands-off operation.
The famous cross-needle meter provides three measurements at the push of one PTT button. And their compact size means they fit into even the most crowded shack. There's a compact cross-needle meter to suit almost any need – choose the one that suits you.

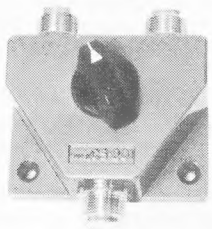
CN510 1.8-60MHz. 200W/2kW. **CN520** 1.8-60MHz. 20W/200W. **CN540** 50-150MHz. 20W/200W. **CN550** 144-250MHz. 20W/200W. **CN620A** 1.8-150MHz. 20W/200W/1000W. **CN630/CN630N** 140-450MHz. 20W/200W. **CN650** 1.2-2.5GHz. 2W/20W. **CN720** 1.8-150MHz. 20W/200W/1kW.

ANTENNA TUNERS

Daiwa **CNA2002**

AUTOMATIC The **CNA1001** and the **CNA2002** are two of the most advanced antenna tuners on the market.
Both provide the convenience and accuracy of automatic tuning at the push of a button! The **CNA2002** is rated at 2.5kW PEP while the **CNA1001** is rated at 500 watts PEP. Both units auto tune within all HF bands 3.5-30MHz, including the new WARC bands. Both units incorporate the unique Daiwa cross-needle meter to indicate SWR and Power. A built-in dummy load is also included for preliminary tuning. **CNA 1001** Daiwa Automatic Tuner 200W. **CNA2002** Daiwa Automatic Antenna Tuner 2.5kW.

MANUAL Daiwa has a superb range of Manual Antenna Tuners to ensure your station operates efficiently by getting maximum power to your antenna system. Rugged design and ease of operation make these tuners a must for any amateur station! **CNW518** Daiwa Manual Antenna Tuner 3.5-50MHz (including WARC). **CN418** Daiwa Manual Antenna Tuner 3.5-30MHz. **CNW218** Daiwa Manual Antenna Tuner 3.5-30MHz.



COAXIAL SWITCHES

You get low-loss and good isolation with Daiwa's professional quality coaxial switches. They all complement Vicom's own unbeatable relays and operate from HF to 70cm. **CS201** Daiwa Coaxial Switch, 2 Pos. **CS201N** Daiwa Coaxial Switch, 2 Pos "N" type. **CS401** Daiwa Coaxial Switch, 4 Pos.

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NEW ZEALAND
PHONE: (4) 69 7625

DEALER ENQUIRIES INVITED!

a word from your EDITOR

The subject of specifications of amateur equipment crops up from time to time. Unfortunately specifications are open to interpretation.

Manufacturers write their specifications around what the transceiver or other equipment is capable of doing. They refer to the prime role of the equipment. If the equipment is used in some other role then some care should be exercised.

We as amateurs should carefully inspect the specification of the equipment and see that it does indeed apply for the usage we have in mind.

For instance, mobile transceivers are usually characterised for operation in a vehicle with the engine running. That is for a battery voltage of a nominal 13.8 volts. If we wish to work for a long time from a stationary vehicle a battery voltage between eleven and twelve volts is likely.

For use under such conditions the maker may well give a negative percentage of the battery voltage. However, if the same positive percentage is applied in the battery voltage tolerance the rig may suffer damage when working off another power supply. This is often covered by a warning in the handbook.

Similarly an SSB transceiver may not perform as well as the SSB power input and output figures would indicate if used for FM or FSK RTTY. Considerably reduced output or inefficient operation may well be encountered in these modes.

To avoid such embarrassments the specifications and handbook should be perused carefully prior to purchase. Also the help and advice of a reputable dealer is of value. A small monetary saving at a discount house may soon be lost if you are wrongly advised or if warranty service is needed.

AR

PRESIDENTIAL COMMENT

Thirty Per Cent Tariff Duty Imposed on HF Transceivers

On 28th June 1983, a new 30 per cent Customs Tariff Duty was imposed on ALL imported transceivers for use in the HF bands, including amateur band only HF transceivers.

The WIA initially negotiated the import by-law approximately 10 years ago, which allowed HF transmitters and transceivers designed for use on the amateur bands to be brought into Australia duty free.

The lifting of the by-law now means the end-user retail price will escalate to approximately 40–45 per cent above current retail prices on *all* amateur HF transceivers.

The WIA and the amateur importing industry were shocked at this news. It would appear from our initial investigations that a number of the current 'general coverage' type amateur transceivers have been illegally modified by unscrupulous retailers and individuals. These modified sets have been sold to the yachting fraternity and others.

The purpose of this type of undesirable activity, was to sell modified amateur equipment for use on the marine bands, at greatly reduced prices than that applicable to 'type approved' and licenceable marine radio equipment, which is manufactured locally.

Equipment designed for amateur use is *not* able to be type approved, nor licensed for use on any other bands, whether modified or not.

(Please refer elsewhere in this issue regarding a joint WIA/NZART statement on illegal maritime mobile operations. That statement was written several weeks prior to notification of the new tariff duties being received.)

It also appears that top level Government negotiations have been going on for some time in secrecy, so much so, that neither the WIA nor the amateur importing industry itself had any prior knowledge of the new tariff duty.

On 6th July 1983, a joint meeting was held at the WIA Federal Office between WIA representatives, senior personnel from Icom, Kenwood, Yaesu, importers and distributors, a customs agent, and the editor of Amateur Radio Action.

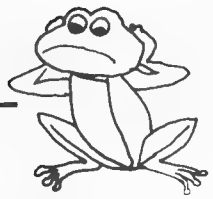
The meeting was held to determine a recommendation for the W.I.A's attitude, and to seek facts and advice on how best to handle this new tariff duty.

At the time of writing this report, we have certain information available to us which may assist us, also details of the 'How and Why' the tariff was initially imposed.

We need to act very quickly and further expert advice is being sought. Members will be kept informed of further developments by Federal Broadcast Tapes, circulars to Divisional Councillors, and articles published in Amateur Radio, Amateur Radio Action and other electronic magazines.

If ever we need a united front, it is now. Please enrol as many new members as possible to preserve our negotiating powers.

Bruce R. Bathols, VK3UV
WIA Federal President



QSP

PIRATE OPERATORS AND IMPROPERLY LICENSED STATIONS

This is a joint statement issued by the Wireless Institute of Australia, and the New Zealand Association of Radio Transmitters. The statement was issued on 1st July 1983. All radio amateurs should read it carefully.

YOUR RESPONSIBILITY AS A RADIO AMATEUR

As licensed radio amateurs, we organise ourselves through the Wireless Institute of Australia and the New Zealand Association of Radio Transmitters Inc, to uphold the standards of the Amateur Service, including the present high standard of entry.

We accept responsibility for helping people who want to become radio amateurs, and for protecting their interests once they have become properly qualified.

We must seek to remove improper and illegal practices that bring the amateur service into disrepute in licensing matters, make regulatory improvement difficult, make it extremely difficult to get support for the amateur service at International conferences, and cheapen the worth of our qualifications and licences.

IMPROPER AND ILLEGAL PRACTICES

We are not directly concerned with stations operating outside amateur bands.

In bands allocated to the amateur service, pirate operators and improperly licensed stations are operating. They are posing as amateur stations, but they fall short of our standards in these ways:

1 *The operator is unqualified.*
2 *Their callsign has not been issued by an administration recognised by the ITU or*
3 *An administration may have issued the callsign without ensuring that a minimum standard of competence to operate in the amateur service has been demonstrated, and*
4 *Operation is contrary to the ITU regulations, the Australian Radio Regulations or the New Zealand Radio regulations.*

MARITIME MOBILE STATIONS

The WIA and the NZART help properly qualified radio amateurs who go to sea, and the sea-going enthusiast who wants to become a genuine radio amateur.

Genuine MM stations are encouraged to make their activities known through IARU societies and amateur radio publications.

Unfortunately, many MM stations using the amateur bands are illegal.

The prefixes used in the Pacific by yachtsmen suggest many improper licences. The International Callbook does not list many callsigns or callsign-sequences used, and enquiries by IARU societies in many countries (for example Liberia) have shown that their licensing administrations are concerned about these pirated callsigns. The Department of Communications in Australia, and the New Zealand Post Office are also most disturbed at these pirate MM activities.

Amateur equipment is cheaper than type-approved equipment, and this may be a reason for what seems to be a concerted effort in yachting circles to encourage the trend away from the maritime service to the amateur service.

ACTION

Except in a GENUINE EMERGENCY involving safety of life when any frequency may be used, as a radio amateur you should:

1 *Cease contact with pirate or improperly licensed stations operating in amateur bands.*
2 *NOT accept third party and other traffic requests.*
3 *If in doubt about the legality of the station you work, seek these details:*
   (a) Name of vessel
   (b) Name of operator, and
   (c) Origin of the licence.

Tell the Australian Department of Communications or the New Zealand Post Office about the station, and tell the station that you are doing so. Get in touch with:

1 *Your local Radio Inspector — he is listed in the telephone book. (Australian amateurs look under 'Department of Communications'.)*

2 *The NZART Post Office liaison officer — his address is PO Box 40 525, Upper Hutt NZ. (New Zealand amateurs only.)*
3 *The WIA Executive, PO Box 300, Caulfield South, Vic 3162. (Write brief details of matter discussed — Australian amateurs only.)*

Help the WIA and NZART to stamp out illegal practices, and to protect your interests.

SALES OF TRANSMITTING EQUIPMENT.

The WIA and NZART considers that the present control of sales of transmitting equipment is unsatisfactory, and will continue to press for stringent control.

When selling transmitting equipment, you should sell only to licensed operators.

THE NEW ZEALAND POST OFFICE AND THE AUSTRALIAN DEPARTMENT OF COMMUNICATIONS

Both fully support the NZART and the WIA in their desire to stamp out improper practices.

The NZPO and DOC have inspected vessels and impounded amateur-type equipment.

The NZPO and DOC will continue to take action against shore-based stations that take part in improper practices.

SPREAD THE WORD

Draw this statement on pirate operators and improperly licensed stations to the attention of any radio amateur who has traffic with pirate / MM stations.,

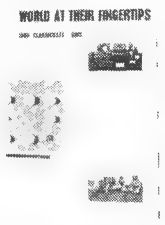
For this purpose you may photocopy this statement.

This statement is published jointly and in conjunction with the Wireless Institute of Australia and the New Zealand Association of Radio Transmitters.

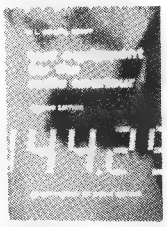
Authorised by
Bruce R. Bathols
WIA FEDERAL PRESIDENT
AR

WINTER IS HERE — BAND CONDITIONS ARE POOR

Curl up beside the fire and read a book



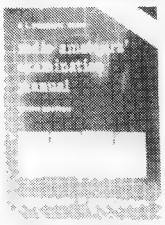
WORLD AT THEIR FINGER TIPS by John Clarricoats, G6CL
A hardcover book of 300 pages telling the story of amateur radio in words and glossy photographs.



TV FOR AMATEURS by John L Wood, G3YQC
A handy little book explaining the principles and getting started in TV to color TV and the 1.3 GHz TV band.

VHF UHF MANUAL by G R Jessop, G6JP
This 4th edition hardcover book tells of the technical advances in 6 years, since the last edition was published.

NZART CALL BOOK '83
Full callsign listing for ZL plus much helpful information.



RADIO AMATEURS EXAMINATION MANUAL by G L Benbow, G3HB
130 pages of information to assist one to pass the amateur examinations.

TEST EQUIPMENT FOR THE RADIO AMATEUR by H L Gibson, G2BUP
Hardcover book describing the range of test equipment and measurement methods.

This new shipment of books is now available. Contact your division of Magpubs, Box 300, South Caulfield, Vic 3162.

WIA REPRESENTATIVES VISIT NZART ANNUAL CONFERENCE

Bruce Bathols, VK3UV
WIA FEDERAL PRESIDENT

As part of the continuing two-way exchange of information between the WIA and the NZART, Bruce Bathols, VK3UV WIA Federal President and David Wardlaw, VK3ADW WIA Executive Member and IARU Liaison Officer, were invited guests at the annual conference of the New Zealand Association of Radio Transmitters (NZART) which was held in Dunedin, NZ over the weekend of 3rd to 6th June 1983.

Both organisations exchange reciprocal visits, thereby keeping in close touch with items which can be mutually beneficial, and of interest to each others members. The aims of both amateur bodies are identical, and needless to say, so are the problems.

The NZART is structured slightly differently to the WIA, in that there are no divisions as we know them here in Australia. The NZART consists of approx eighty 'branches', each branch being formed by a local radio club and consists of either transmitting or non-transmitting members. A branch may be formed if more than eight members in a particular area are desirous of forming such a branch.

At the annual conference, a delegate from each branch is represented, however, some of the smaller branches may not send a delegate, therefore a branch desirous of having its views known but not being able to have a delegate present, will give a proxy to a delegate from a larger branch who will present votes on behalf of the absent branch. It was not uncommon for one branch delegate to be holding proxies for three or four other smaller branches.

Each member of the NZART is able to register a vote through his, her branch, therefore a delegate representing the branch (either direct or by proxy) may vote proportionally for or against a particular REMIT (motion discussion point) as it is presented.

Remits are published in Break In one month prior to the annual conference, therefore each branch is able to discuss their voting preferences prior to the conference, and the aggregate of individual branch members voting preferences are then presented to the conference through the attending delegate.

In amateur operating matters etc, votes of Remits are restricted to transmitting members only, matters of an administrative nature are open to all branch members to vote upon.

Daily administrative and operational policy matters are handled by the NZART Council (similar to the WIA Executive). The Council consists of twenty two NZART members who are elected to office by the branches in an election which is conducted several weeks prior to the conference.

Councillors reside in all parts of the country, therefore the council meets in person only once each year. That meeting is on the day prior to the annual conference. It will discuss policy matters and general administrative affairs.

To keep in regular contact with each other, council conducts a monthly net on 80 metres, and discusses 'on air' items of importance to the NZART in general.

A full time paid secretary (based in Upper Hutt) co-ordinates council activities and circulates matters to councillors on a regular basis. Matters which are of a sensitive nature and unable to be discussed on the monthly net are handled by mail.

Much use is made of volunteer labour in a similar manner as in the WIA, and it is agreed by both organisations, that due to increasing demands of members, a certain amount of paid professional help is now required. Neither organisation can function without the backbone of volunteers at the grass roots level, but the day is coming in the not too distant future where daily administrative matters can only be handled by paid full time staff. This will certainly be the case as membership numbers increase. It will put both the WIA and the NZART on the same administrative basis as the RSGB (UK) and the ARRL (USA).

Some of the problems common to both amateur societies are:

Tower difficulties — a greater public awareness of amateur radio towers and their effect on the environment is evident. NZART have several legal cases pending at the moment.

TVI and RFI (a world-wide problem).

Lack of volunteers (suitably qualified or otherwise) to service important posts.

Difficulty in obtaining major press publicity in amateur radio affairs. The AREC (Amateur Radio Emergency Corps — similar to our WICEN) appears to have a much greater acceptance with the authorities, and is officially recognised for its capabilities. A certain amount of press coverage is given to AREC matters, as it is the primary service associated with major Search and Rescue and Civil Defence organisations.

Increasing inflation, and a possible loss of members as fees are increased to cover normal running costs. It was recognised by both groups that fees must be increased annually to maintain existing services, otherwise reserves would be eroded as inflation took its effect.

Increasing costs of production of the respective amateur journals (Amateur Radio and Break In). Both groups suffered heavy losses in 1982 due to increased costs in the printing industry.

Both groups share excellent liaison with the relevant licensing authorities — Department of Communications and the New Zealand Post Office.

Two NZART representatives will be attending the WIA convention in 1984, and WIA representatives will attend the NZART conference in 1985.

Mail exchanges during the year also helps to keep each group up to date. It was accepted that these continuing exchanges are important, so that both groups are aware of changing trends as they occur.

For the mutual benefit of both societies, and the amateur service in general, these lines of communication must always be kept open.

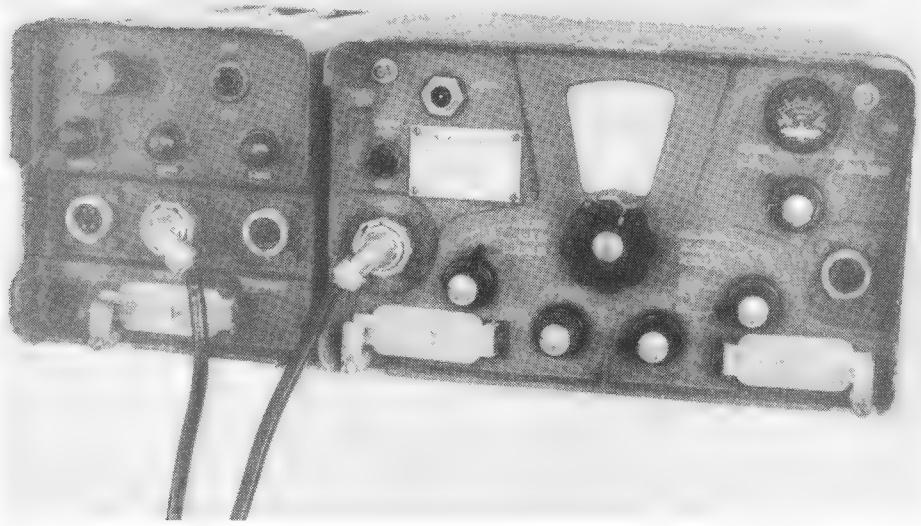
Below — Bruce VK3UV and David VK3ADW at the NZART Conference. AR

MODERN MILITARY SURPLUS EQUIPMENT

Colin MacKinnon VK2DYM
PO Box 21, Pennant Hills NSW 2120

WIRELESS SENDER — THE C11

The C11 is a transmitter for CW, AM and FSK covering 2-16 MHz. It was used mobile in some AFV's and in command wireless vehicles. The associated receiver is the R210. The power supply was the Supply Unit Transformer Rotary 24V and it had a very nice aerial tuner ATU No 7.



SPECIFICATIONS

Power Requirements:
24V at 20 amps Tx, 3 amps standby.
Frequency coverage:
Band 1 2 to 4 MHz
Band 2 4 to 8 MHz
Band 3 8 to 16 MHz

Mode of Operation:
Transmission of CW, AM and FSK with an adaptor
Power output:
Low — 3 to 10 watts
High — 12 to 50 watts dependent on frequency in use.
Microphone: 600 ohms
Antenna: 75 ohms

Dail Calibration:
Band 1 and 2-2.5 kHz/division
Band 3-5 kHz/division
Weight: C11 31 Kg.
PSU 20 kg.
ATU 9 kg.
Total: 60 kg

Intercom amp:
output — 250 MW into 30 ohms.

VALVE LINE UP:

Serial No.	Type	Function	Equivalent
V1	CV4010, CV850	Master oscillator	6AK5, EF95
V2	CV4039, CV2129	Buffer	5763, QV03-12
V3	CV4039, CV2129	Amp/doubler	5763, QV03-12
V4	CV4039, CV2129	Amp/doubler	5763, QV03-12
V5	CV2347	Power amp	
V6	CV2347	Power amp	
V7	CV4007, CV283	AMC Detector	6AL5
V8	CV2347	Modulator	
V9	CV2347	Modulator	
V10	CV4003, CV491	AF amp	12AU7,ECC82
V11	CV4015, CV131	Mic amp	6065, EF92
V12	CV4003, CV491	Mixer/osc.	12AU7, ECC82
V13	CV4010, CV850	CW sidetone Oscillator	6AK5, EF95
V14	CV287	Voltage stabiliser	150B3
V15	CV4010, CV850	Intercom amp.	6AK5, EF95
V16	CV4010, CV850	Intercom amp.	6AK5, EF95
Power Supply Unit			
V101	CV395	Voltage Stabiliser	QS150/45
V102	CV395	Voltage Stabiliser	QS150/45

PRINCIPLE OF OPERATION

The master oscillator V1 covers a frequency from 2 MHz to 4 MHz. The oscillator unit is housed in a sealed, substantial diecast case. The output is buffered in V2 and fed to the band switch. On band 1 V3 is bypassed but on band 2 V3 a doubler is brought into circuit and V4 is an amplifier. On band 3, V4 becomes a doubler also. V5 & V6 are final amplifiers in parallel.

V11 is a microphone amplifier feeding an AF amp V10 thence to the push pull modulator V8 and V9. Modulation is applied to the screens of V4, V5 and V6 and also to the anodes of V5 and V6. V7 is a detector for Automatic Modulation Control AMC which is fed back to V11 to maintain modulation level constant.

V13 is a sidetone oscillator for CW and amplified by V10.

V14 is a voltage stabiliser for V1 and is housed in the same enclosure.

For calibration a 100 kHz signal from oscillator V12B is mixed in V12A with the master oscillator output from buffer V2. The resultant beat signal is amplified in the AF amp stages.

The intercom AF amp V15 and V16 is powered by voltage from the R210 receiver.

ANTENNA TUNING UNIT NO 7

This unit matches the 75 ohm transmitter output to various short antennae over the frequency range. It has a variable capacitor controlled by a Match knob and a roller inductor tuned via a Tune control with a digital counter to indicate position. An aerial current metre assists the tuning process. The output connection is a large insulated single wire terminal.

The aerial base used with a rod aerial is specified as a Base No 31. The base for the VHF units is a No 28.

POWER SUPPLY UNIT

The PSU connects to the C11 via a harness and a 12 pin socket. It also has a 12 pin socket for a harness to the R210. The power plug is 4 pin and the power lead has two wires in parallel for +ve and -ve to carry the current. A rotary transformer converts 24V to ± 530V and a stabilised +300V via dropping resistors and stabilisers V101 and V102.

Voltages required by the C11 are:
HT1 — +300 VDC
HT2 — +530 VDC at about 500 mA.
HT2 — -530 VDC — ie isolated from chassis earth.

Filaments- +19 VDC
Fan & Relays +24 VDC

FRONT PANEL CONTROL INTERCONNECTION SOCKET SktB

A — Tx mike input
B — intercom and Tx microphone shield
C — intercom microphone input
D — PTT line
E — no connection
F — +24 VDC output via PLA-K
G — intercom and speaker output
H — no connection
J — intercom speaker output
K — no connection
L — no connection
M — speaker output.

MODIFICATIONS

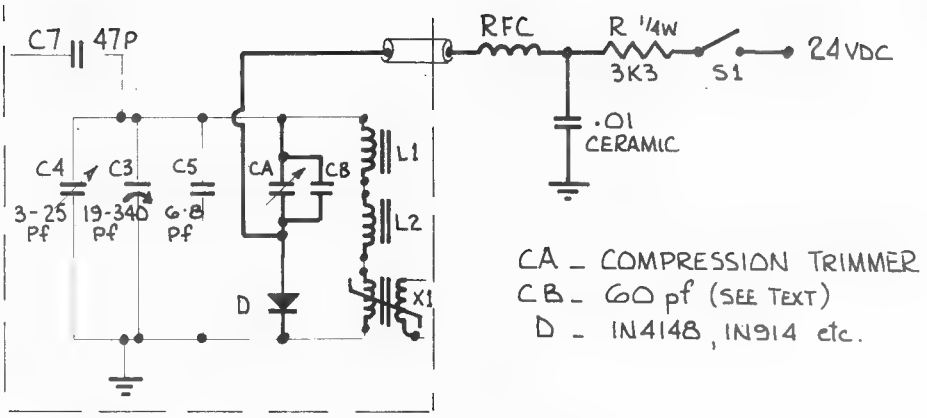
1) To operate the set make the following connections:-

Microphone to pins A and B Shield to B.
PTT switch to pin D
PTT return to earth
Speaker to pins G and M
Receiver to REC AE receiver aerial BNC socket

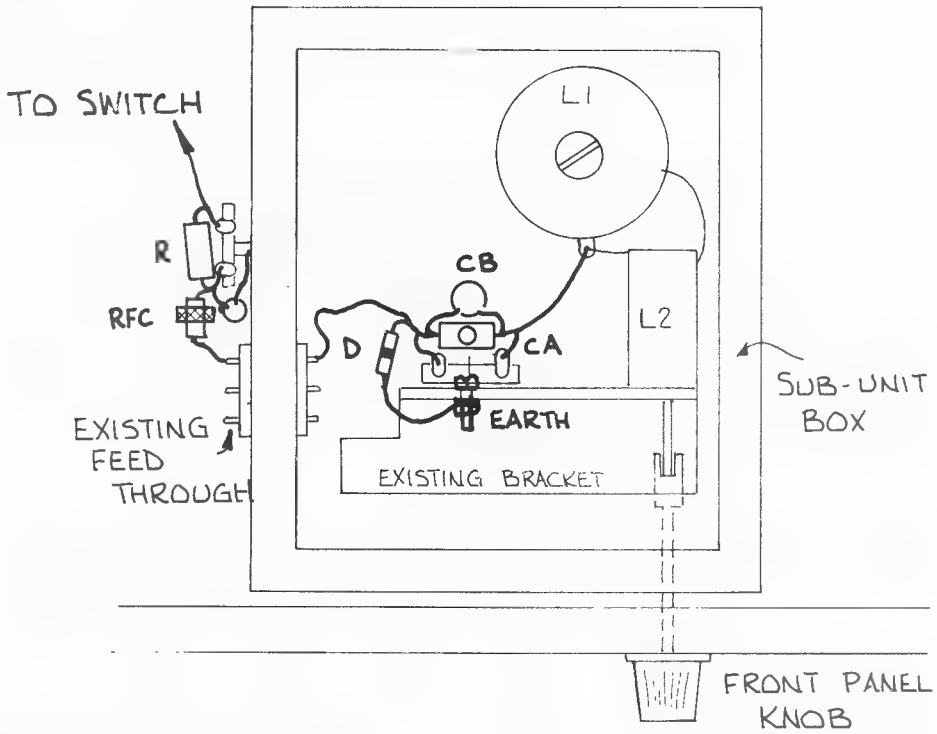
Note that during operation the vents on the front and rear of both the C11 and PSU must be opened to allow air circulation.

When the C11 control switch is set to CW the PTT line can be keyed and operates semi-break-in.

2) The C11 can be operated directly into a dipole using 75 ohm co-ax. For other impedances the ATU No 7 can be used. The large insulator on the rear can be replaced with an SO239 on a metal plate fitted in place of the insulator.



Oscillator Sub-Unit



Layout

160 METRE MODIFICATION

The C11 can be modified to operate on the 1.80-1.86 band by switching in added capacitance across C3, the tuning capacitor in the oscillator sub-unit.

The bottom cover was removed from the oscillator sub-unit to reveal coil L1, and L2 which is adjustable from the front panel for calibration.

The bracket supporting L2 was drilled to mount a small 2 lug tag strip onto which was mounted the compression trimmer and 60 pF capacitor with the diode going from one end to an earth lug. A wire was soldered from the other side of C(A) to the top of L1 (actually the farthermost end of L1 looking from the top). Another wire was connected from the junction of the diode and C(A) to an existing unused terminal feed-through on the sub-unit.

Use heavy, rigid connecting wire and ensure the added parts are supported rigidly to prevent vibration and frequency variations.

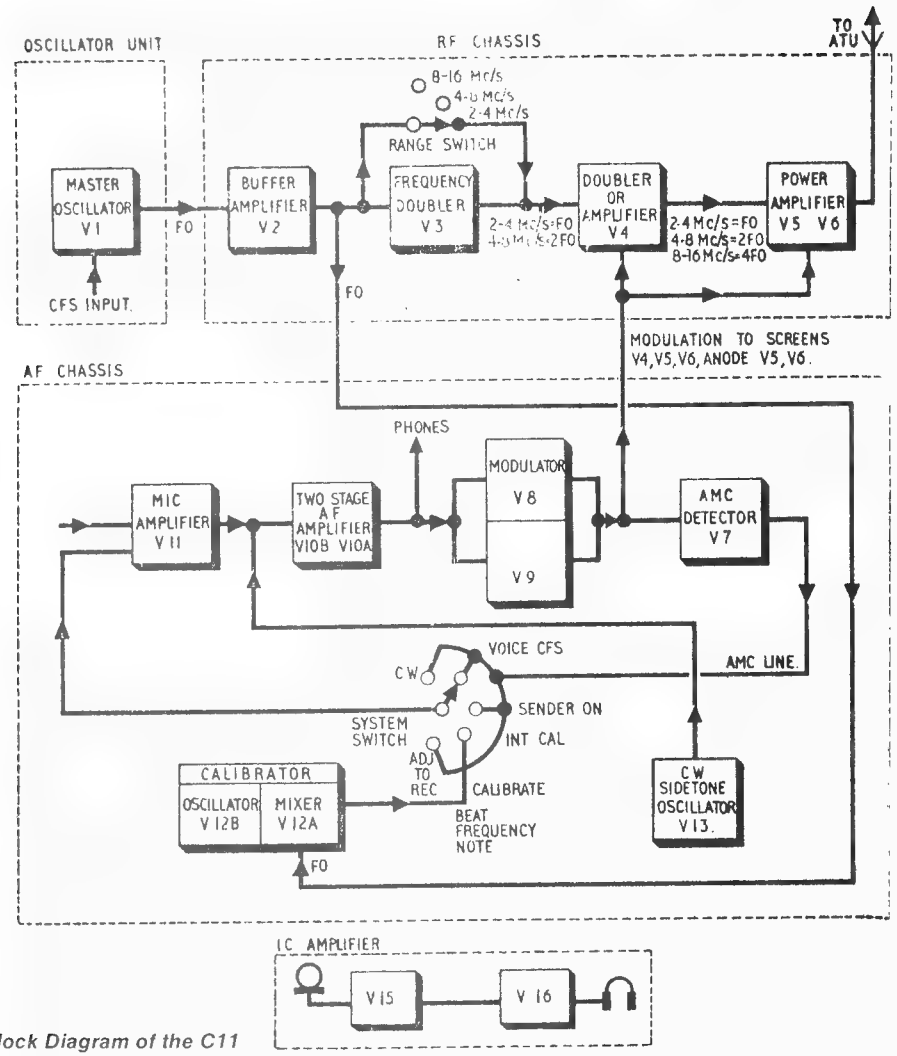
A second 2 lug tag strip was fitted on an existing bolt on the feed through block on the outside of the sub-unit and the RFC, R, and bypass capacitor mounted there-on.

I found a space on the front panel just to the left of the metre and big enough for a miniature SPST switch. There is a convenient 24V terminal available near the right hand side of the meter.

I used a frequency counter as an aid to calibration but other means of determining the frequency should be satisfactory.

The calibration procedure followed was to set the tuning dial on 2.000 MHz, the front calibration central (L2) at mid travel and the new switch off.

Run the transmitter for at least half an hour to allow temperatures to stabilise.



Block Diagram of the C11

With the transmitter keyed at low power into a dummy load the frequency was adjusted to exactly 2.000 MHz by adjusting the position of the ferrite slug in L1.

The new switch was then operated and the trimmer C(A) adjusted till the transmit frequency was now exactly 1.800 MHz.

I found some interaction between the adjustments so you may have to go through the procedure a couple of times to get a close calibration. During normal operation the calibration control and internal crystal calibrator can be used for exact frequency setting.

I also found that a 60 pF N750 capacitor for C(B) was best for my set after trying various others. One problem is to get the frequency / temperature variations reasonably correct. At one stage I had the normal 2.00 MHz increasing in frequency with temperature and the 1.8 MHz decreasing.

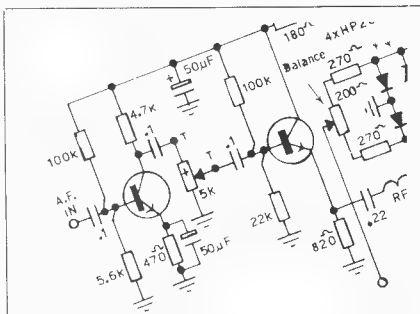
As I was not concerned about operating on the 3.5-3.70 MHz band I didn't try to adjust for correct frequency tracking or power output but did adjust L8 and L12 for maximum output at 1.80 MHz and C28 and C49 for maximum at 1.86 MHz. These adjustments interact so need to be done a couple of times.

Although I had no problem bringing the oscillator sub-unit down to 1.800 MHz it did tend to drop out of oscillation just below 1.8 MHz.

Depending on the gain and feedback of individual sets, some modification may be needed to ensure reliable oscillation at the 1.80 MHz frequency.

ACKNOWLEDGEMENT. These articles could not have been written without the help of Ian VK2ZIO, Ross VK2ZUY, and Tony VK2DKY, who know this equipment far better than I. I just put pen to paper! I must also thank Abe, our friendly disposals proprietor, who let us climb on his mountains of electronic gear, looking for parts.

AR



CIRCUITS

The Circuits of the equipment in this series of articles are held in the Federal Office.

Photocopies may be obtained by writing to the Secretary WIA at PO Box 300 South Caulfield 3162. To defray the costs of this service a suitable donation would be appreciated.

Bill Blitheringtwit

Ted Holmes, VK3DEH
20 Edmond Street, Parkdale, Vic 3195

BILL PREPARES TO GO MOBILE

After the fiasco involving the wrecking of his TV antenna, Bill Blitheringtwit was banned from any further radio activities in the house. Bill was not unduly concerned. It had happened before. His wife usually relented in the end, being unable to stand the sight of Bill's woebegone expression as he moped around the place. Bill's face was already adopting the pitiful spaniel look, in preparation for his campaign to resume his normal trail of destruction. It generally worked, but, meantime, he had decided to go mobile.

Bill's somewhat battered Holden station wagon was standing in the driveway, all doors open, and Bill was about to drill a hole in the centre of the roof. He stood on a small cane bottomed chair, purloined from the lounge room, and, as soon as his full weight was deployed upon the fragile cane seat, the cane broke and Bill fell through it. He stood there, wearing the chair likt a skirt around his hips, staring with dismay at the power drill he was holding. For in his sudden descent, the drill bit had struck the gutter of the Holden and snapped off. All he had left was a jagged stump.

This was awkward! It would take him hours to find another bit. Never mind. He wrenched himself out of the ruins of the lounge room chair and plunged into the morass of the garage. An hour or so later he discovered another bit — albeit somewhat rusty — but it would do. This one was larger than the first, but it seemed OK. At any rate, it was when he had last used it in 1938.

He stood on the car bonnet and aimed the drill in roughly the centre of the roof. Owing to the size of the bit and the fact that Bill had not made a starter hole, the thing skidded a few times before finally biting. This resulted in numerous scratches appearing in the already saddened paintwork, but, in the end, Bill had made a decent sized hole.

His satisfaction was rather diminished when he looked inside the car and discovered that the drill had effectively destroyed the inside roof light. His spirits sank lower still when he looked at the car bonnet, whereon two large dents, size 9, were clearly evident.

True to type, Bill pressed on regardless and finally got his long suffering 22S installed beneath the dashboard. He hooked up the RG58U coax and slammed the car door, thereby neatly severing the coax, which had not been properly guided into the driving compartment.

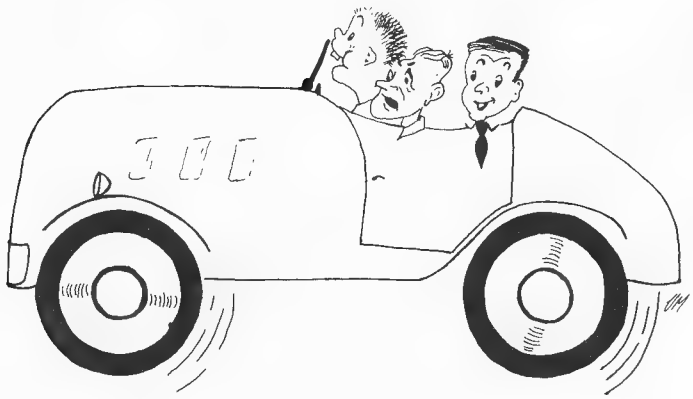
He sighed and sat down to think about it. What with one thing and another, it just wasn't his day! **AR**

SHACK CRAWLING 1930s STYLE

or THREE MEN IN A RUBBIDY-DUB-DUB

Alan Shawsmith, VK4SS
35 Whynot Street, West End, Qld 4101

Since pre-war days man's mobility has increased dramatically but even the lack of high-speed reliable transport did not dampen the enthusiasm for 'Shack Crawling', half a century ago.



One promising morning three Southside Brisbane amateurs, viz Harry 4HR, Bill 4YO and Fred 4RF set out in a gregarious frame of mind to visit a few cross-town Northsiders, one in particular being Arthur (Chilla) 4SD — a round trip of about thirty miles. Lacking wheels of any sort, they barrowed a Baby Austin Seven HP Tourer which, although mobile, probably would not have passed a machinery test. In high spirits, the three scrambled aboard.

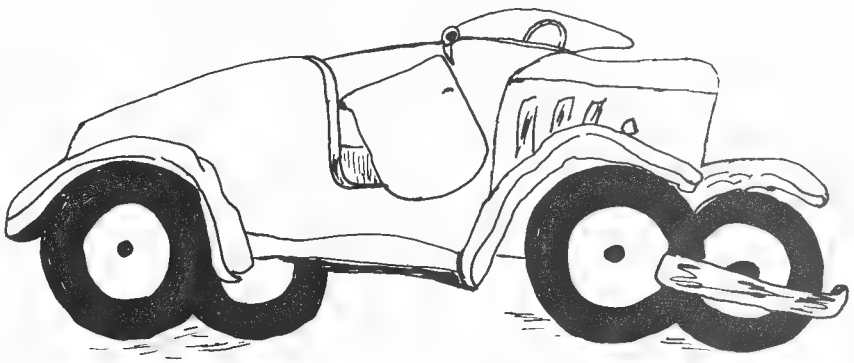
As such vehicles can now be seen only in glossy magazines or at Vintage Displays, a short discription is in order. The Baby Austin Seven was a small, lightweight, low priced, economy 'jalopy' of narrow proportions and held together with a minimum of parts; in the modern vernacular it might have been described as 'a cheap heap', especially if secondhand. Alongside its more cumbersome, heavyweight counterparts of the day it looked almost like a toy. This writer had the misfortune to own a Baby Austin Seven Tourer in the late 30s and more time was spent repairing it than driving it. In fact it was finally nicknamed JIGSAW — at every bump it fell to bits. As long as the motor compression was 100 per cent its full seven HP could, by planting the foot, maintain a reasonable speed. However, once wear and tear set in the vehicle was usually re-named 'Baby Austin Seven Kanardly' can hardly go downhill with the wind, let alone up any.

Those 'do-it-yourself backyard homebrewers' who removed the motor head to rebore the Baby out mostly received a shock. The pistons looked like some half size toy of the real thing. Any strong youth could lift the back or front wheels off the ground in fact, there was a standing joke which said, "Never park it broadside to a westerly wind or you'll come back and find it blown over." Another derisive comment about the Baby Austin Seven was that it lacked the very thing it needed most a pair of bicycle pedals.

Anyway, so much for its mechanics. Our above-mentioned enthusiastic trio were in too high a mood to worry about a bit of slap and play in their newly-acquired means of locomotion, they were out to enjoy themselves — but Fate had other plans! Their spirits were soon to be dashed; catastrophe awaited at the bottom of the first hill. Three men in a Baby Austin is like three men in a tub; there's more human flesh than tin and iron. As they approached the first intersection, it was found the brakes (mechanical of course) just weren't up to coping with the load, so it was a case of swerving sharply or shooting out into a busy main road. This sudden deviation was too much, the Baby skidded in gravel, listed onto two wheels, hung for a moment defying gravity then crashed on its side to the accompaniment of smashing glass and snapping metal. After a long moment of stunned silence the three disentangled themselves and bailed out with great alacrity through a halo of raised dust. A quick appraisal of the battered Baby clearly showed the JIGSAW syndrome; the windscreen had fallen out, one headlamp was missing and superficial dents and scratches marred the bodywork. A few nuts and bolts lay near by, while petrol, water, oil and battery fluid (but thankfully no blood) seeped across the road. Apart from a few small patches of missing skin, the occupants had proved more durable than the Baby.

However, where there's a will there's a way. Having pooled their pocket money and filled the tank, they naturally didn't want to see the liquid vaporize itself in the dirt at their feet — besides cash was a scarce commodity in those immediate post depression days, even though a gallon of gas could be got for a mere eighteen cents. It was a simple matter to put the Baby back on its feet and, as all four wheels appeared to point in the same general direction, it was decided to carry on undaunted — that is, if what was left of the velocipede would work. So, gathering up the broken bits and pieces, the trio gingerly climbed back into the Austin Seven and, wonder of wonders, the motor motored and the steering steered. They had already found out about the 'anchors' . . .

Apart from a periodic, spasmodic splutter from the motor, the round trip was safely accomplished. Needless to say, returning the jalopy to the lender presented an anxious moment. However, the owner, though obviously not pleased at the spectacle, philosophically accepted the situation that better a battered Baby than three battered amateurs.



AR

THE GROUND PLANE ANTENNA

J A Gazard VK5JG
2 Corbin Road, Medindie Gardens, SA 5081

The ground plane antenna is very popular on VHF both with amateur and commercial stations. It consists of a quarter wave vertical element and four quarter wave horizontal radials with angles of 90 degrees between them. It is usually fed by a coaxial cable, the centre conductor of which goes to the vertical and the outer is joined to the radials at their centre point. An even simpler version could be useful on the HF bands.

When a signal is fed to the antenna currents will flow into the radials and they will be equal and opposite in each pair of opposed radials. Therefore any radiation due to these currents will be cancelled, the radials will not radiate and will have no radiation resistance. The resistance or impedance of the radials will be just the "copper" resistance and will be close to zero.

The currents flowing in the radials will therefore consume near zero power and all the power will be concentrated in the vertical which has a low angle of radiation. This is the property which makes the GP antenna successful. The GP can be considered as a vertical dipole in which the lower half consumes no power and has zero resistance so that the impedance of the GP should be half that of a dipole, that is 35 ohms. This is approximately so.

Now if this reasoning is correct then one pair of opposed radials will be sufficient to cancel the field of the radials so that a GP should function just as well with only two radials set at 180 degrees. To test this idea the following simple on-air tests were carried out:

1 The strength of a 144 MHz signal radiated by GP antenna was measured by an S-meter at a point about 9 km away. Two opposite radials were then removed from the antenna and the signal strength measured again. There was no change in the signal strength or the SWR when the radials were removed.

2 Only one radial was removed. Again there was no change and rotating the antenna showed no directional effect. This result surprised at first because it was thought that the unopposed radial would radiate, change the low angle pattern and have a directional effect; also that there would be a change in the SWR. However it was later realised that the opposed pair of radials would have zero impedance and would thus "short out" the unopposed radial so that it would have no effect.

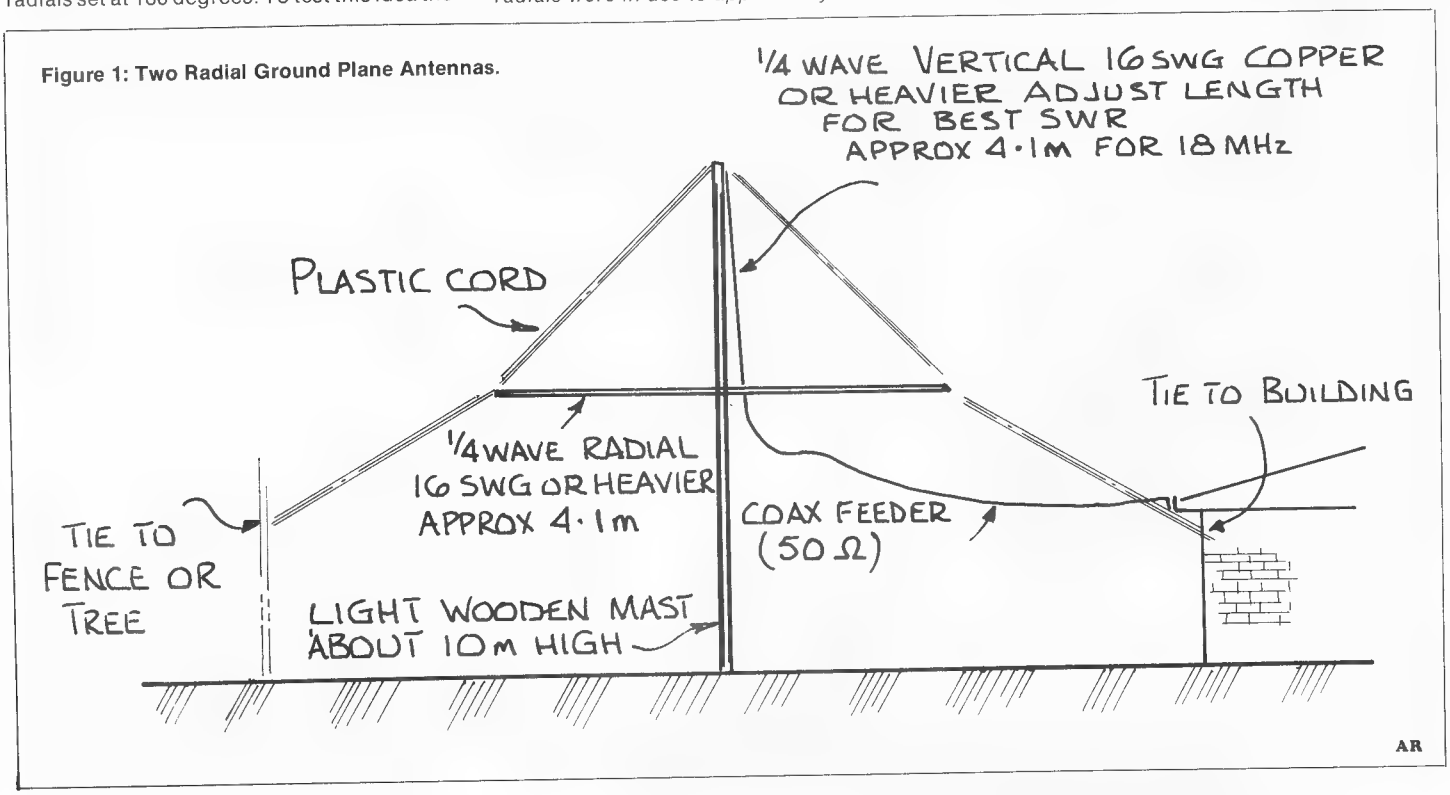
3 Two radials were removed leaving two radials at 90 degrees. There was a pronounced directional effect — the signal varying from a maximum of slightly above that when the four radials were in use to appreciably less as the antenna was rotated. The SWR changed from 1.5 noted in the previous tests to 1.2 indicating that the impedance was now closer to 50 ohms.

These tests although not very precise support the reasoning that a GP with two opposed radials will perform just the same as one with four. There is little to be gained in cost and convenience by using only two radials at VHF but on the lower frequency bands the use of only two radials would greatly simplify the erection of a GP antenna.

Figure 1 shows how a two radial GP antenna for the new 18 MHz band could be set up in a back garden. It would use only a light wood pole, plastic cord, and wire and would be easy to erect and adjust. With adjusted wire lengths the antenna could be used on the 28, 24, 21 and 14 MHz bands but would require a taller pole for 7 MHz.

Next to a beam the GP with its low angle of radiation is generally considered to be the best DX antenna so that this set-up should be worth trying.

Figure 1: Two Radial Ground Plane Antennas.


1/4 WAVE VERTICAL 16 SWG COPPER OR HEAVIER ADJUST LENGTH FOR BEST SWR APPROX 4·1m FOR 18 MHz
PLASTIC CORD
TIE TO BUILDING
1/4 WAVE RADIAL 16 SWG OR HEAVIER APPROX 4·1m
COAX FEEDER (50 Ω)
TIE TO FENCE OR TREE
LIGHT WOODEN MAST ABOUT 10m HIGH
AR

TRY THIS

SIMPLE SIGNAL SOURCES

A G Loveday VK4KAL
"Aviemore", Rubyvale, Qld 4702

Although it is the age of SSB, transistors, ICs and sundry exotic means of generating radio signals, some newcomers to radio, as a hobby, probably don't realise it was not always as now — especially on the VHF front.

The days of AM (amplitude modulation) may be long since gone, which is a shame as it still has its uses. Some "new" explorers to two metres may like to try their skill at getting simple gear to work; here is something to whet your appetite. The author got a great deal of pleasure building and working with it; the cost: next to nothing. Fig 1 shows a single valve two metre source.

I daresay it could be transistorised quite easily, for those who may not be familiar with valves. Fig 2 is a suggested circuit.

I wonder how many stations there are, still using AM on two metres. I am aware of a few around Brisbane. I think a comeback to AM would be a good thing on VHF where there is plenty of band, just waiting to be used. However, try your luck with these. Put your theory into practise and add your own PA.

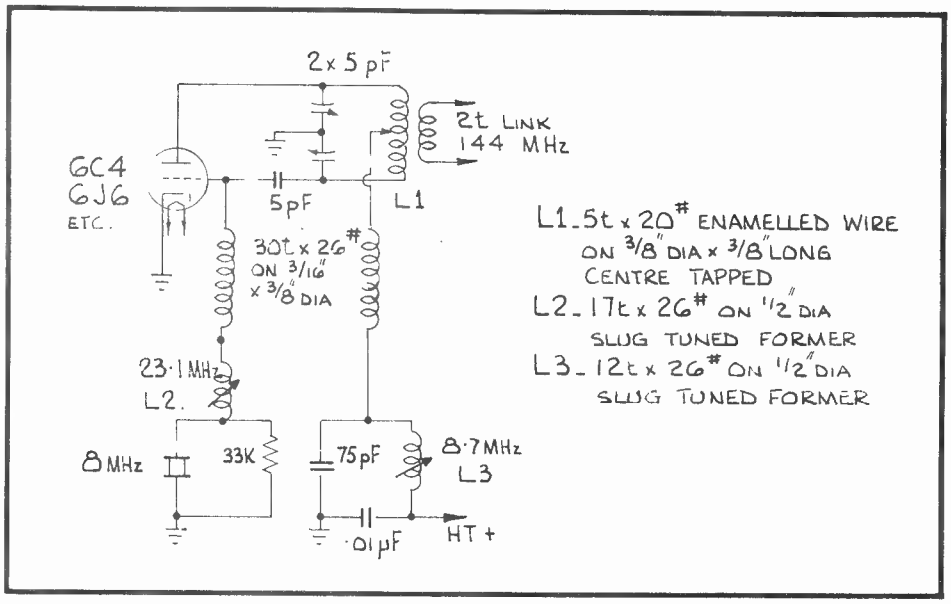


Fig 1 Single valve two metre source.

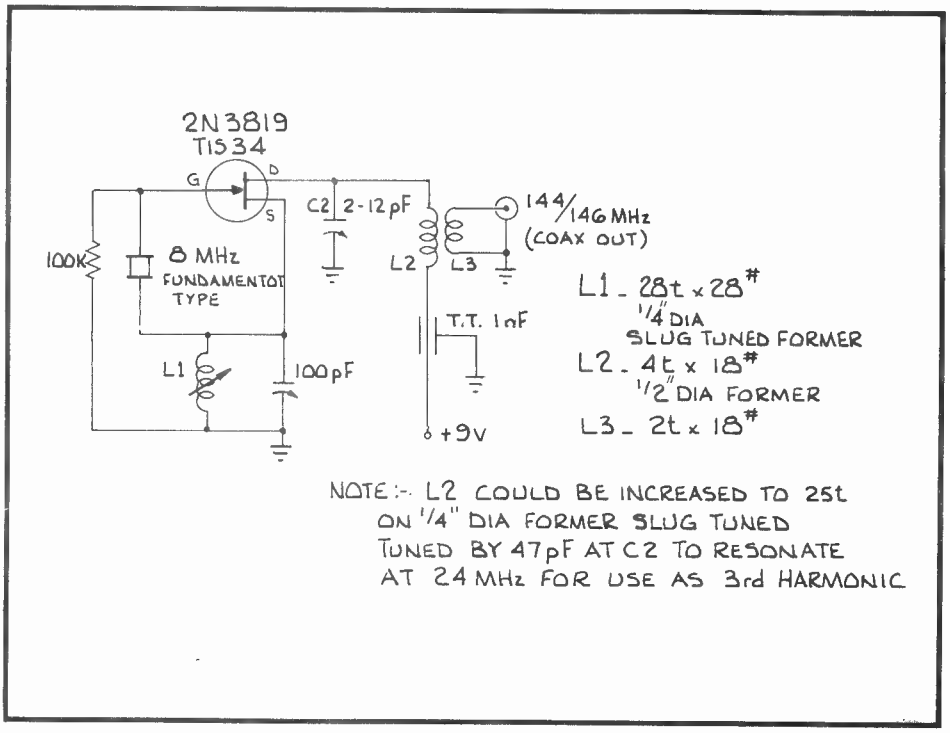


Fig 2 Single transistor two metre source.

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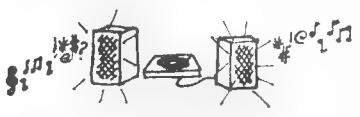
TECHNICAL EDITOR'S NOTE

The circuits described here produce many harmonics in addition to the desired one at 144 MHz. In some applications these could cause problems.

Note also that the power available at 144 MHz is very limited. You won't drive a following PA stage beyond the mW region.

EMC
(Electro Magnetic Compatibility)



If radio frequency interference is causing you a problem you are reminded that — "Advice on all types and aspects of interference (PLI, TVI, AFI, etc.) is available from the National EMC Advisory Service".

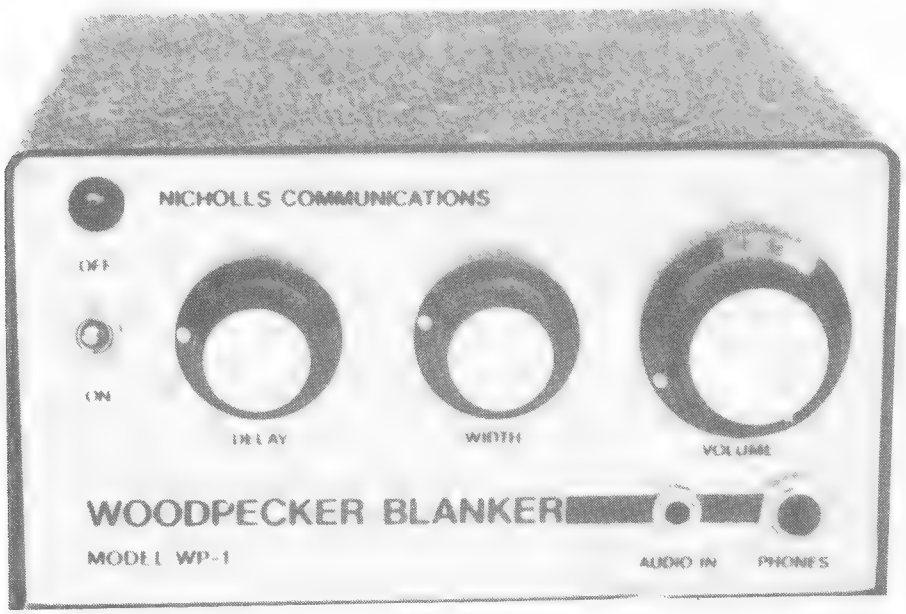
FORWARD DETAILS TO
VK3QQ,
Federal EMC Co-ordinator, QTHR.

EQUIPMENT REVIEW

Ron Fisher VK3OM
TECHNICAL EDITOR
3 Fairview Avenue, Glen Waverley, Vic 3150

THE NICHOLLS "WOODPECKER" BLANKER

I am sure that all HF operators (unless you only work on 80 metres) are familiar with the "Woodpecker" over the Horizon Radar and the problems that it can cause to reception. At times it can run well over S9 and wipe out very strong amateur signals.



Many of the current model transceivers now have noise blankers that are intended to cope with the Woodpecker problem but readers of Amateur Radio reviews will have noted that few of these blankers are as effective as they could be. Older transceivers with normal noise blankers have no hope at all. However all is not lost. For some time now, NICHOLLS COMMUNICATIONS have been producing their WOODPECKER BLANKER which they claim is the best answer available to the problem.

Let me quote from their description of the unit.

"The Woodpecker can be wired directly into most noise blanker circuits provided in HF communications receivers. Used in this fashion, it can reduce the strength of the interference by up to 70 dB. Alternatively, for receivers without a built in noise blanker, the device functions as an audio stage blanker and offers relief from the audible effects of the Woodpecker. To facilitate this, the Woodpecker Blanker incorporates its own audio amplifier and plugs directly into the headphone or tape outputs from any receiver. The circuit employs the principle of "synchronous blanking", in which a local crystal-locked oscillator generates a reference signal to control the blanking circuit. This is possible because the Woodpecker radar transmissions use a consistant, precisely defined pulse repetition frequency. The blanker is synchronised manually with the incoming interference pulses, and subsequently remains in sync for lengthy periods."

The Nicholls blanker is available in either kit form or completely built up and ready to go. It is, however, necessary to wire in a connection to your transceiver noise blanker and provide a 12 to 15 volt DC power supply. In general the connection to the transceiver is quite simple and instructions are included that cover most popular models. A suitable miniature coax connector must also be fitted to the transceiver. Luckily many transceivers provide spare RCA type sockets on the rear panel.

For our test, I used a Kenwood R-820 receiver which was also modified to provide the required 12 volt DC operating voltage.

THE WOODPECKER BLANKER ON TEST

First find your Woodpecker. When I hooked the blanker up, I thought someone must have passed the information to the intruders allerting them to switch the thing off. A bit like the local two metre repeater which is always on the air — until you want to line up your receiver!

However like the bad penny it turned up at last. First thing of course, it is not necessary to turn on the noise blanker in the transceiver for Woodpecker blanking. All control is done from the Woodpecker blanker itself. For IF blanking, which we are now set up for, the delay and width controls

Internal View of the Woodpecker Blanker

set the blanking action. The volume control is used for audio blanking as we shall see later. The blanking pulses are generated by an IC divider controlled by an internal crystal oscillator. The 'Delay' control is adjusted to synchronise these pulses with the woodpecker. The 'width' control sets the gap width which of course must be as wide as possible to give the best intelligibility. Does it work? Yes!! Indeed it does.

but don't try to use it for CW reception. The blanking pulses will remove about 50% of the signal. With voice reception of course, it is possible to lose a considerable amount of the transmitted signal and yet still retain a fair degree of intelligibility.

The action of the NICHOLLS BLANKER is really quite remarkable. Even with the Woodpecker running S9+20 dB it is possible to copy signals around the S5 mark, However when I say copy, I don't mean perfect 'armchair' copy — you will be working hard, but the signal will be there.

One of the problems is to know when the Woodpecker has stopped. The blanker is like a Woodpecker in reverse. There are holes in place of strong signal pulses.

Now for a few slight problems. Adjustment of the width and delay controls is fairly critical to get the best effect. If you are tempted to turn the blanker off to see if the Woodpecker has disappeared, the controls will need to be peaked again.

Now to the action of the audio section of the blanker. This is designed to be used with a transceiver or receiver that does not have a noise blanker. A couple of common ones that come to mind are the FT-200 and the FRG-7. Audio output from the headphone jack is fed to the audio input socket on the front panel of the blanker. Headphones are plugged in, volume adjusted and the width and delay controls set in the same manner as before. I found that the best effect was obtained with a fast AGC action or possibly no AGC at all. With slow AGC; the receiver is shut off during the Woodpecker pulses and no amount of external blanking will restore the wanted signal. The overall action of the audio section of the blanker is certainly not as good as the IF blanking, but with careful adjustment of receiver and blanker excellent results can be obtained.

Next slight problem. The headphone jack on the blanker is not a stereo type, so your Supermarket type phones will only work on one side.

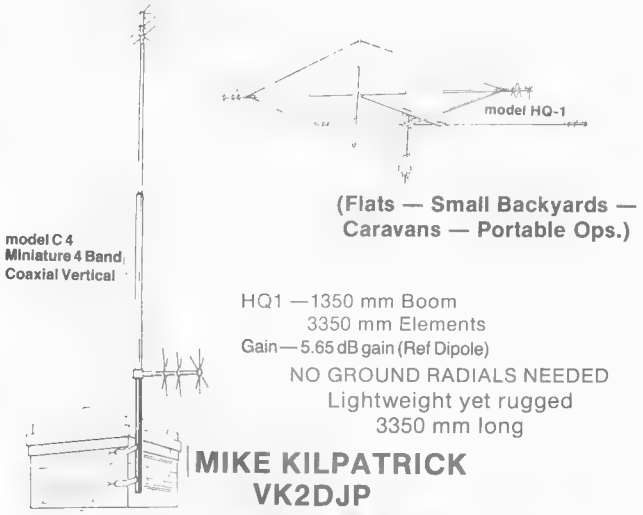
The general construction of the NICHOLLS BLANKER is quite reasonable. The front panel looks attractive and good quality components are used throughout. One other slight problem however is the DC power connector. A miniature audio type plug is used for this which if inserted incorrectly could short out the input supply. A concentric type DC connector should be used here.

The instructions supplied are complete and well written. A full parts list, circuit diagram, board layout and waveform diagrams are included.

Our review Blanker was supplied by NICHOLLS COMMUNICATIONS PO Box 246, Jamison, ACT 2614 to whom all enquiries should be addressed.

AR

COUNCIL PROBLEMS?
THE ANSWER TO LIMITED SPACE
EFFICIENT ANTENNA FOR LIMITED SPACE
Both models C/4 & HQ1 cover 6-10-15 and 20 m.



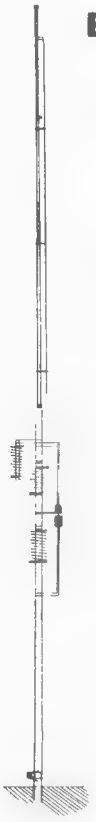
(Flats — Small Backyards — Caravans — Portable Ops.)

HQ1 —1350 mm Boom
3350 mm Elements
Gain—5.65 dB gain (Ref Dipole)
NO GROUND RADIALS NEEDED
Lightweight yet rugged
3350 mm long

MIKE KILPATRICK
VK2DJP

WATCHMAN ELECTRONICS
28 Elouera Cres, Woodbine, NSW 2560
Phone (046)26 6101

BUTTERNUT ELECTRONICS CO.



Still More Usable Antenna For Your Money . . .
Plus 30 Metres!

Butternut's new model HF6V* offers more active radiator on more bands than any other vertical of comparable height. DIFFERENTIAL REACTANCE TUNING ™ circuitry lets the 26' antenna work on 80/75, 40, 30, 20 and 10 metres and a loss-free linear decoupler gives full quarter wave unloaded performance on 15 metres. It can also be modified for remaining WARC bands.

- ★ Completely automatic bandswitching 80 through 10 metres including 30 metres (10.1-10.15 MHz): 160 through 10 metres with optional TBR-160 unit.
- ★ Retrofit capability for 18 and 24 MHz bands.
- ★ No lossy traps to rob you of power. The HF6V's three resonator circuits use rugged HV ceramic capacitators and large-diameter self-supporting inductors for unmatched circuit Q and efficiency.
- ★ Eye-level adjustment for precise resonance in any segment of 80/75 metres, incl. MARS and CAP ranges. No need to lower antenna to QSY between phone and CW bands.
- ★ For ground, rooftop, tower installations — no guys required.

Suggested amateur net prices:
model HF6V (automatic bandswitching 80-10 meters) **$282**
Model TBR-160 (160 metre base resonator)
(When supplied as part of HF6V) **$66**

For complete information concerning the HF6V and other Butternut products, amateur and commercial, contact the sole Australian distributor:-

TRAEGER DISTRIBUTORS (NSW) PTY LTD
PO Box 348, Moree, NSW. 2400.
Cnr Adelaide & Chester Sts.
Phone (067) 52 1627

★ Patented device

"AMATEUR RADIO HOUSE"

Susan Brown, VK2BSB
DIVISIONAL PRESIDENT
Box 1066, Parramatta, NSW 2150

On the 28th May the new divisional premises of VK2 were officially opened. This is a story of the lead up to this exciting and important day.

The NSW Division's new premises at 109 Wigram Street, Parramatta, "Amateur Radio House", was officially opened on Saturday 28th May, 1983 by Mr Gary Punch, Federal MP for Barton. Distinguished guests at the opening included Mr Stan Dickson, Mayor of Parramatta, Mr John Milton, NSW State Manager of the Department of Communications, Federal President of the WIA Mr Bruce Bathols VK3UV and three Life Members of the NSW Division, Mr Bill Moore VK2HZ, Mr Cec Bardwell VK2IR and Mr Keith Howard VK2AKX.

The opening was the culmination of three years of preparations and negotiations by NSW amateurs, particularly members of Divisional Council both past and present. The idea to sell the Crows Nest property had been around for over ten years but was first discussed seriously at the Fourth Conference of Clubs in May 1981 when a motion recommending that *"Council investigate selling the Atchison Street property and purchasing property in the Granville/Parramatta area"* was carried. At the July 1981 meeting of the Divisional Council, Stephen Pall VK2PS (*then VK2VHP*) was authorised to research the feasibility and costs involved with a move to the Parramatta area. After negotiations with four leading estate agents, Steve presented a four page report to council and the Fifth Conference of Clubs. This report was then presented to all members for decision at the March 1982 AGM of the Division. The motion to sell and move to Parramatta was carried with a majority of 2:1.

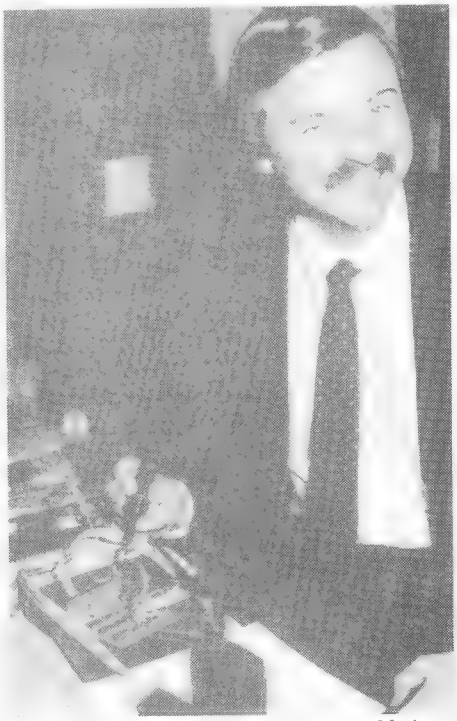
Thanks largely to Steve's excellent preparation and research, the move to Parramatta was effected within four months. The Crows Nest property sold for $410 000 and after purchase of our new two storey brick building at Parramatta for $345 000, a net gain of about $40 000 was realised after payment of transfer fees, advertising and legal expenses.

Those of you who have moved house will appreciate the amount of work involved, and the Division is greatly indebted to not only Steve, but our Honorary Solicitor Fred Herron VK2BHE who handled all the legal aspects and transfers of monies, and the then Divisional Secretary Athol Tilley VK2BAD who supervised transfer of property and conducted the great volume of correspondence involved throughout the move. A new Administrative Secretary Mrs Joan Condon was employed after interviewing fifteen applicants and the new office opened for business in September 1982.

Nearly $25 000 has been spent partitioning and furnishing the office and library area on the first floor which is carpeted and air-conditioned. The Divisional library now has over 10 000 magazines and books on display in thirteen bookshelves arranged around the lounge area. Special thanks must go to two members of the Division; Bill Hayes VK2AJL who spent four years collating and sorting in the basement stack room at Crows Nest, and Aub Topp VK2AXT who is the present Honorary Librarian and is reponsible for the fine display at Parramatta. *(PS Donations are always welcome).* The building is open five days a week from 11 am to 2 pm and Wednesday evenings from 7 to 9 pm.

When the room downstairs is let, the resultant rent will more than cover the running costs of the new building. It is thanks to the support of all members over the years who have contributed to the NSW Division that this fine facility for amateurs has been made possible. **AR**

Four hundred years of ragchewing and amateur radio.
Some oldtimers who attended the opening of "Amateur Radio House" on 28th May at Parramatta. Back row l to r: Bruce Thomas VK2FD (licenced 40 years), Bill Hayes VK2AJL (45), Cecil Bardwell VK2IR (45), Tom O'Donnell VK2OD (52), Harry Caldecott VK2DA (57). Front row l to r: Eric Smith VK2NWV (83 years old and licenced since 1978!) Ivan Agar VK2AIM (46), Bill Moore VK2HZ (52) and Bert Dimmock VK2OW (48).



Gary Punch, Federal MP for Barton soldering after making a UHF contact.

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1. David VK2BDT and Ivan VK2AIM. 2. Gary Punch delivering his opening address. 3. Keith VK2AKX and Ivan VK2AIM. 4. Barry VK2AAB and Bill VK2EBM next to the VHF/UHF display. 5. Ray VK2DB with the display of old radio gear. 6. Bob VK2VKD, Dave VK2KDW and Col VK2DYM. 7. Outside view of Amateur Radio House.

7

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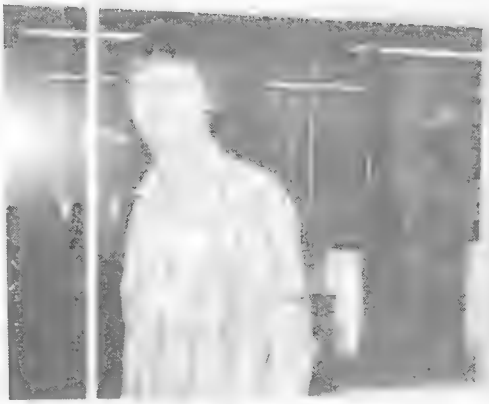

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1. Aub VK2AXT and his wife next to a park gap transmitter. 2. Athol VK2BAD. 3. Bill VK2HZ. 4. Virginia and Ken Mathews VK2WE. 5. General view of audience. 6. Gareth VK2ANF and Bruce VK2FD. 7. Steven VK2ZSK, Wendy Wilson and Jan Henley.

ANNEE MONDIALE DES COMMUNICATIONS

WORLD COMMUNICATIONS YEAR

AÑO MUNDIAL DE LAS COMUNICACIONES

1983

AMATEUR RADIO IN SPACE

Astronaut Owen Garriott plans a historic astronaut-to-private-citizen link-up during the STS-9 mission, currently scheduled for launch on 30 September, 1983

There will be an amateur radio transceiver aboard STS-9. Dr Owen Garriott, an amateur radio operator, will use a hand-held radio during part of his off-duty time to communicate with some of the thousands of amateur radio operators around the world Garriott's callsign is W5LFL. Use of the transceiver will be limited to one hour a day All amateur radio operations for STS-9 will be in the two metre band. Transmissions will be in the range 145.51 MHz to 145.770 MHz FM. Reception will be in the range 144.910 to 145.470 MHz FM. Twenty kilohertz steps will be used to both transmit and receive.

Garriott will wear the standard in-flight headset when operating the radio. Plans call for Astronaut Garriott to use the equipment during his off-duty periods in such a way as not to interfere with other mission activities. Random contacts will be made with individual radio amateurs in various parts of the world, thus providing the first occasion in the history of the space programme for individual citizens around the world to speak directly with an astronaut in space using their own equipment from their own homes and automobiles.

While there will be practical limits to the number of two-way contacts possible during the course of a single shuttle mission, both radio amateurs and non-amateurs possessing receivers and scanners will be able to listen to transmissions by W5LFL as the spacecraft passes overhead.

This operation will directly support the objectives of the US Council for World Communications Year 83 by directing public attention to another important dimension of space communications in which astronauts and private citizens in countries all around the world are brought into direct contact for the first time in history.

Confirmation cards will be issued by the American Radio Relay League to all of those making contact with the spacecraft during the mission, as well as to those submitting evidence of reception of Astronaut Garriott's transmissions via W5LFL.

It may also interest you to know that STS-9 will be the first flight of the Spacelab, a joint effort of NASA and the European Space Agency. The crew will be John Young, mission commander, Air Force Major Brewster H Shaw, pilot; Dr Owen K Garriott and Dr Robert A Parker, mission specialists. The prime or onboard payload specialists selected by ESA and NASA for this flight are: Ulf Merbold, a German Physicist, and Byron K Lichtenberg, a biomedical engineer. The second European, Wubbo J Ockels, a Dutch physicist, and the second American, Michael Lampton, a physicist, will act as flight backups and will be deeply involved with the payload operations from the ground throughout the duration of the mission.

Information supplied by:
Mrs I L Scott,
Public Services Branch,
Office of Public Affairs,
NASA,
Houston, Texas, 77058 USA. **AR**

"Do you mind if I transmit OM? I'm trying to locate an intermittent fault." — VK2EBM

Mmmm — I must oil this key!! — VK2EBM

PACKET RADIO

VK PACKET RADIO GROUP

The Sydney Amateur Digital Communications Group has been established to foster interest in Packet Radio.

The group has established a local area network (LAN) consisting of VK2BVD, VK2KFJ, VK2ZJO and VK2ZXQ. The frequencies used are 147 6 MHz for a digital repeater and 145.575 MHz for liaison and direct communications

Experiments so far include a bulletin board and digital repeater. Operation has been at a data rate of 1200 Baud.

Further experiments include HF operation and HF Gateways and the establishment of further packet radio networks and interstate links.

Packet Radio is a new and exciting means of communication using Data and Computer techniques to provide communications both directly and by means of relay techniques. It is one of the ways in which we must expand.

Interested readers are urged to contact the group who have made the first steps in this exciting field.

Further information may be obtained from — Jim Swetlikoe, VK2BVD, 8 Prahran Avenue, French's Forrest, NSW 2086. Phone (02) 452 2668 in the evenings. Or phone John Tanner, VK2ZXQ at (02) 663 0161 in the daytime.

INTERCONTINENTAL PACKET RADIO TESTS SUCCESSFUL

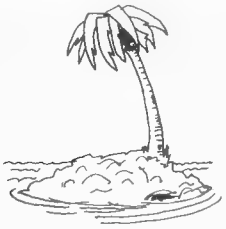
At approximately 2300 UTC on 27 May, a successful digital packet radio QSO was held between Tom Clark, W3IWI in Maryland and Ian Ashley, ZL1AOX near Auckland, New Zealand on 28 MHz. This 13850 km path represents the longest distance yet bridged using packet radio. Both stations were using the Terminal Node Controller (TNC) developed by the Tucson Amateur Packet Radio group in conjunction with home built S-100 computers. The QSO used Frequency Shift Keying (FSK) techniques at a data rate of 1200 Baud.

Although propogation conditions were marginal, data exchanges consisted of "beacon" transmissions and two-way connection acknowledgements using the amateur AX.25 HDLC protocol. With this protocol messages are sent repeatedly until they are successfully acknowledged by the other station.

Also participating in the test was Bob Diersing, N5AHD in Corpus Christi, Texas, W3IWI and N5AHD have held several successful packet radio QSOs. N5AHD monitored the beacon and text transmissions from both W3IWI and ZL1AOX.

All three stations involved are affiliated with AMSAT and have been experimenting with high speed digital transmissions in anticipation of conducting similar activities with AMSAT's Phase-3B satellite due to be launched in the near future, and with AMSAT's PACSAT packet radio satellite now being designed.

Terry Carrol, ZL3QL
33 Ryeland Avenue, Christchurch 4 NZ



HOW'S DX

Ken McLachlan, VK3AH
Box 39, Mooroolbark, Vic 3138

It is two years since I commenced writing these notes and although the bands are on the downward trend, a lot of new countries have been activated and worked by VK's for a new one towards their DXCC score. The rarer countries are still there but it requires more patience to develop the art of finding the elusive country that will be a new one for your score and when it is found it will be a lot harder to dig it out of the noise to make a successful contact.

I commenced with one helper, Eric L30042, who has not missed one monthly report. Now it has grown to many more subscribers from most states, and new ones are still appearing from time to time. To those that have supplied information or written notes of thanks and given me the incentive to continue, sincere thanks. To those operators and listeners that have thought about sending in a report and have not done so, please do, as any information helps, even if it is duplicated with another report. It helps to verify what may have been discarded as a dubious rumour. At all times the endeavour is to bring to you, the reader, accurate and up to date information about past and forthcoming DX, QSL managers and routes to assist all readers to achieve more confirmed DX countries, and general interesting DX news.

During the period of writing the column, I have been able to build up reciprocal agreements with DX editors of other magazines world wide, so that we can exchange documentation of what is happening around the world. It has and will continue to be my policy that no information used in the column will be taken through verbal contacts with any sources and all information is verified and researched as much as possible before being printed.

CHINA

New stations that should be QRV this year to assist BY1PK and BY1AA in the demand made by the multitudes are BY1QH and BY7RA according to Tom VE7BC. Still no news on when SSB will be officially introduced though.

LIBERIA

The Liberian Radio Amateurs Association has announced that their administration has issued the special calls A81LC, A82LC, A85LC, A87LC, A88LC and A89LC which will be current until the end of the year.

These special callsigns are to highlight the Ganta Leper Colonies plight (Ganta is located about 350 km NE of Monrovia) and all amounts sent for postage of QSL's will be donated to the colony. There is a special award for working all of the six callsigns.

QSL's to B Johannson, PO Box 134, S-67101, Arvika, Sweden.

LARGE CLASS

Bill P29BR and another staff member of the Papua New Guinea Technical University set up a demonstration amateur station as a public relations exercise. The results were overwhelming and now this busy duo have a class of some 110 that will be sitting for the amateur exam in November. With some luck a number of new P29 calls will be heard on the DX bands early next year.

MAIL INTERCEPTION

Herick FH0FLO still claims that his mail is being interfered with. **Please do not** put callsigns on the envelopes, but simply Herick Maudit-Larive, PO Box 200, Tampon 97430 France. This should reach him intact.

Without saying, it is not necessary to have your own call or any other give away that the letter concerns your hobby.

FURTHER DOCUMENTATION

Don Search, who administers the ARRL DXCC programme, is not satisfied with the credentials that have been presented by Peter S2BTF, and at this time he is rejecting claims on this station. The last station from this area, that had the green light, was S21GW and that was in late 1981.

XU1SS

According to a report in "QRZ DX" JH3DPB anticipates a JA group will be QRV for three weeks from the 10th August.

Recently a group of JA's have had lengthy discussions with the Prime Minister of XU in an effort to establish amateur stations there. Apparently the man they were talking with was Son San. Son San is the head of the Khymer People's National Liberation Front (the "Khymer Serei") which is one of the two guerrilla governments, the other being the "Khymer Rouge" which over threw the US backed Lon Nol government in 1975.

What countries are going to recognise what licences if they are issued? Don Search, the gentleman looking down the microscope on QSL cards at ARRL Headquarters is in for a few not so restful weeks ahead if this comes off, even if it only turns out to be a well organised propaganda stunt.

DONATIONS OR CONTRIBUTIONS?

The above paragraph has jogged my memory that no cards have been forthcoming from the updated calls of the 1Z9 group that were active in early March. Could this be a genuine "bottom of the harbour" scheme which includes my investment of two "greenies" for cards and photographs?

Another long awaited answer, this time to the tune of ten "greenies" is that 7JY7 Diploma which was promulgated late last year. It is known that another VK amateur fulfilled the requirements and applied. Neither that person or myself have gained a glimpse of any mail from the palace in Jordan.

TURKEY

It is believed that a new law was passed in Turkey in April which will legalise amateur operations in that country this year. This indeed is excellent news for the amateur fraternity as a whole though it would be prudent still not to advertise the hobby on any correspondence to friends in that country.

OMISSION

In relating the statistics of VK0HI in this column (June p29) VK5 was unintentionally omitted from the listing. In fact 126 VK5 operators contacted VK0HI on SSB and five of these appeared more than three times and fifteen more than twice in the log.

STRANGE PREFIX

Remember the "DXpedition" using the unusual call 4T3S that was eminating from the ruins of Sechin in early April and the excellent signal that was being received by all and sundry in the eastern states.

The operator was Carlos OA4CIT and he kindly forwarded Austine VK3YL, a photograph of himself at the operating position along with his QSL card.

Carlos OA4CIT.

SMOM

The next planned operation of the rare station 1A0KM is October and November. The driving force behind the whole operation since its inception has been Mario I0MGM and due to his business commitments, as an attorney, the station has not been manned as originally was envisaged.

T31 AND KH1

For those that missed out on Erik SM0AGD when he was in the area there may be another chance for these elusive calls.

From all reports received it appears that Doug T30DB will be operating from Central Kiribati and American Phoenix towards the latter part of this month if the carefully laid plans come to fruition.

THIRTY METRE NET

Stewart VK2LS is running a daily net on 10.146 MHz USB (just outside the prohibited area of 10.141.5 ± 4 kHz) at 0700 UTC and presently covers stations from the VK2, 3, 4 and 5 call areas. The object of the net is to increase usage of the 10, 18 and 24 MHz allocations. Don't be shy, place a dipole in the air and join in. You will be made welcome.

ANGOLA

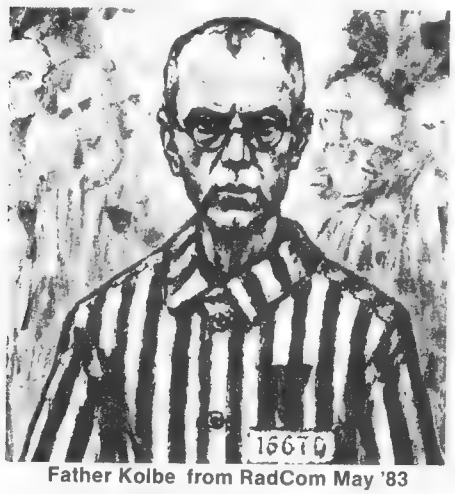
There is a strong possibility that OK3TAB and his helpers will sign OK3TAB/D2A again in the near future. Their last operation was in 1979 and with the new DXers since that period, business for them should be brisk.

FATHER MAKSYMILIAN KOLBE SP3RN

Father Maksymilian Kolbe, a Polish Franciscan friar, was canonised on 10 October 1982 by Pope John Paul following a joint proposal to the Holy See by both the Polish and German churches.

Fr Kolbe was incarcerated in Auschwitz concentration camp during World War II. On the morning of 2 August '41, a man escaped while being taken to work. The authorities immediately retaliated by killing ten people from each block of the camp.

In Block 14, Fr Kolbe asked that he be taken in place of one of the ten who had a wife and children. This was agreed to and Fr Kolbe was killed by a lethal injection on the 14th August. The man whose place he took is now an elderly crippled Polish farmer, according to the satellite TV pictures and commentary that was received in this country. This gentleman was presented to Pope John Paul II during his recent trip to Poland.



Father Kolbe from RadCom May '83

ZS SPECIAL SUFFIX

The special suffix RSA was activated by many ZS operators including Diane ZS5DC, at the end of May. This special suffix was allocated by the administration to celebrate the 22nd anniversary of the formation of the Republic of South Africa. All QSL's to ZS5L either direct or via the bureau.

NOT VALID

DXpress reports that Don Search W3AZD, the ARRL DXCC administrator, has stated that no C9 operation in the last two years will count as a credit for DXCC. This will come as a let down for many who thought they had this country off their wanted list.

A FIRST?

A QSO between VK6RO and DL7UX. So what, many will say! This contact was made in December last year and was on 24 MHz. Probably the first that was made on that band between VK and DL.

Graham VK6RO, had a CW QSO with G6ZO on 18 MHz at 1300 UTC on the 27th December 1982 and he was told by the other operator that it was the first QSO on that band between VK and G, also a CW QSO on 24 MHz between G3KMA and Graham at 1036 UTC on 26 December 1982 was another first for both countries.

Graham is also claiming a first for the following countries:

24 MHz

DATE	UTC	CALL	MODE
18:12:82	1146	OE5HEW	CW
26:12:82	1110	OZ2RH	CW
27:12:82	1023	F8FE	CW
27:12:82	1035	4X6CA	CW
27:12:82	1052	HB9FT	CW
08:01:83	1112	PA0PN	CW
15:01:83	1119	GW3AHN	CW
13:03:83	1046	A4XYF	CW
13:03:83	1047	A4XYF	SSB
18:03:83	1116	GI4GPC	CW
19:03:83	1124	VK9YC	CW
20:03:83	0856	ZS6JW	CW
23:03:83	0011	ZS6BCI	SSB
23:03:83	1017	K1BJ/3B8	CW
23:03:83	1018	K1BJ/3B8	SSB
31:03:83	1050	K1BJ/3B9	CW
31:03:83	1050	K1BJ/3B9	SSB

18 MHz

27:12:82	1315	GM3WOJ	CW
27:12:82	1331	DL1TQ	CW
08:01:83	1259	OZ2RH	CW
23:12:82	0930	ZS6BCT	CW
23:12:82	0931	ZS6BCT	SSB
15:01:83	1119	GW3AHN	CW
06:03:83	1121	VK9YC	CW
23:03:83	1023	K1BJ/3B8CW	CW

To settle who was the first VK to work various countries on the new WARC bands should not be a momentous task and I am willing to sort it out. If contenders for the honour care to send copies of documented evidence such as QSL cards to me, I will select the first stations to work each new band and publish the results in this column. If there are no contenders by the first of November it will be taken that Graham's claim is valid for all the "firsts" as noted above.

Graham in his letter mentions that there are very few amateurs on these new bands but signals are there as his proves with the extract from his log. How about it DXers, let us populate all our bands this year in commemoration of WCY83.

MORE ON THE WARC BANDS

An interesting letter from Lindsay VK5GZ, commenting on the activity on these bands and some of the good DX he has heard and worked. Lindsay notes that he has more CW contacts on 30 metres than any other band now and the recent acquisition of Dan C31XO in the log book has spurred his interest.

Lindsay's equipment is an Icom 730 into dipoles and inverted Vee's for coverage across the spectrum.

Lindsay, it is felt that the readers of this column will look forward to further reports from you on the activity of the 10, 18 and 24 MHz bands in future issues.

CELEBRATIONS

It was a pleasure to have a SSB QSO with Soupy W5NW on twenty metres at 0723 UTC on the 20 June. Not unusual to hear this big signal in VK at anytime on either CW or SSB, however this was a celebration, as it was Soupy's sixtieth anniversary of obtaining his amateur licence.

Many of Soupy's friends congregated from the Oceania area to wish him well and many more years of happy operating with his XYL Beth W5DUR.

Soupy, W5NW

Soupy has dedicated all his spare time to the hobby since he gained his licence at the age of sixteen and over the years that he has been licenced and it could be said that he has never made an enemy. This is the type of person Soupy is. Soupy has 354 DXCC countries confirmed according to the ARRL DXCC list. Quite an effort! Think of the QSO's over this period, a total would look similar to an ISD telephone number.

AX3ITU

All cards that have been received by mail have been replied to and the balance of contacts that were made have had cards placed in the bureau on their behalf.

RADIOTELEGRAPHY CHAMPIONSHIP

The first European Radiotelegraphy Championship supported by the IARU Region 1 Division will be held in Moscow in December. The contest has been organised by the USSR amateurs for World Communications Year 1983. Many events are on the programme, including tests for speed and accuracy in both reception and transmission for both lady and gentleman operators, also special events are envisaged for men and women under 18. This is one country that is fostering the continued use of telegraphy on our bands.

VISITOR FROM ACROSS THE TASMAN

Arthur VK3UX and his daughter Betty, played host to Bill ZL4AW on his recent whistle stop tour of the VK eastern states. Both amateurs have been long standing members of the ANZA Net on 21.203 MHz at 0500 UTC daily and the International Pacific

Photograph: VK3AH.

Percy VK3PA, Bill ZL4AW and Art VK3UX.

DX Net that is held on Tuesdays and Fridays at 0600 UTC on 14.265 MHz.

No photo of such a meeting would be complete without the presence of Percy VK3PA, who has been the anchor man of these nets over a period of many years. Arrangements were made and Percy made the trip to Arthur's QTH.

These three operators have an aggregate of 140 years of operating experience between them since they were licenced and on appearances many more hours will be spent at the hobby in the decades to come.

CONGRATULATIONS

On a quick scan through a recent edition of CqDX, produced by the DARL it was noticed that John VK6AJW took out the Oceania continent top score in the 1982 European DX Contest. John had a score of 50900 points.

Another excellent performance was by VK6NCW who gained himself a certificate for his high score and weekend of effort. Thanks to these and other operators who ably represented the VK prefix on this weekend.

DEMOCRATIC REPUBLIC OF YEMEN

Pierre, J28AZ, over many years of travelling to this country on business now says he has permission to operate.

Anticipated starting date, 24th August for eight days.

He will be using the callsign 7O1AB. Limitations have been placed on his countries list.

SAN FELIX

Still not to be overlooked this year. A CE group hope to activate San Ambrosio or another nearby small island. These alternatives are due to the military situation on San Felix.

IA ORANA

Did you work French Polynesia (FO8/TO8 or FO0/TO0) during 10th to 17 July? The Radio Club of French Polynesia was participating in this years "Tiurai Special" which coincides with French Bastille Day.

Stations that contacted at least three stations on at least two different bands qualify for an attractive multi-coloured certificate.

QSL information for FO/TOs — 8 HL, HO, DF, HI and 0FB is via WB6GFJ.

Certificate is obtainable for 12 IRCs from RCFP, BP5006, Pirae, Island of Tahiti, French Polynesia.

WCY83 IN SYRIA

Syrian Radio Amateurs shall be using a new prefix to celebrate World Communications Year.

Four stations will be operating in all bands with the callsign of 6C1AA, 6C1AM, 6C1AN and 6C1AO. Operation will be during the period of: 0000 UTC Saturday, 15 October, 1983 until 2400 UTC Friday 21 October, 1983. During this period no station in Syria shall be using the YK prefix.

AR

PROFILE DK2WH

Many VK operators will possess the fine QSL card that shows the ivory carving of famous "Erbacher Rose". One such operator that uses this picture is Gunter DK2WH.

Gunter obtained his licence in mid 1968 at the age of sixteen and his equipment comprised a HW32 into a five band ground plane. Gunter was "hooked" on DX from the very start of his amateur activities and took the opportunity in the late 70s to purchase land nearly on top of a mountain in the area that he lives so that he could build a house and have plenty of estate for an antenna farm with farmland on the other side of the road.

Early 1981 saw the new house completed and the beginnings of an antenna farm with dipoles for 80 to 40 metres and a Mosley MP 33 for the higher bands. Gunter has updated his equipment to the Drake "C" line running into a L4B amplifier and now also runs a Siemens T100 teleprinter.

Gunter is supported in his hobby by his XYL (though unlicensed) and their seven year old daughter and all of his spare time, from his demanding occupation of teaching mentally handicapped children, is taken up with his hobbies of amateur radio and playing the trombone in a band.

VH0HI was the 297th country for his DXCC and of these he has 293 confirmed.

HAPPY ZL OPERATORS

A gang of keen DXers is one way to describe the Johnston family from Papakura NZ. Dave ZL1AMN, XYL Aola ZL1ALE and daughter Carol ZL1AJL are all in the bracket of having confirmed in excess of 300 countries. Dave mentions in a letter that when he has Heard Island confirmed he will be able to obtain the ARRL 315 countries sticker.

This family is not new to the hobby by any means as Dave is a retired NZART Councillor, Vice President of the local NZART Branch, part time lecturer at licence classes and Editor of the Club Magazine. Dave and Carol will be remembered for their part in the last Kermadec Island expedition which took place in late 1977.

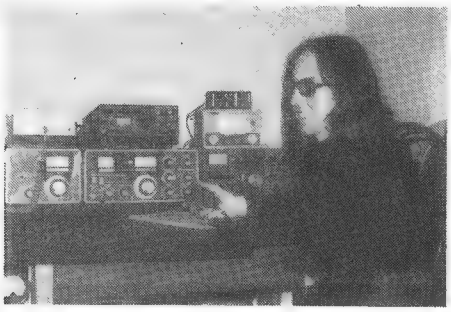
The "antenna farm", which allows action from 432 MHz to 80 metres, at the families QTH which is five hundred feet above sea level and has a clear look across the Tasman.

Dave is looking forward to his retirement in October 1984. Plans and "bookings" for such events as Thanksgiving Dinner for Aola and himself with Tom ex KH6HDA (a well known callsign that shows up in VK logs many times), a fishing trip with Tony KL7AF from Kodiak Island, visits to many of Aola's YL operator friends in Vancouver and that is only for starters. Thoughts of a visit to the UK are

Gunter in his spacious shack

Dave ZL1AMN

Aola ZL1ALE



Carol ZL1AJL

still in the embryo stage but a guess is that GM areas will not be overlooked.

On return to "Kiwi" land, the agenda has such notes, that conjure up thoughts of putting devices into service that have been bought on the holiday, improving that already big signal and the search for more countries as they become available.

Aola, your unlimited time with the use of the equipment during the daytime is coming to an end. Now is the time to accrue as many countries as you can before you go overseas.

QTH's YOU MAY NEED

5H3TM	*PO Box 1426, Mbeya, Tanzania.*
5Z4DD	*PO Box 30270, Nairobi, Kenya.*
6Y5AM	*PO Box 90, Kingston, Jamaica.*
9J2CV	*PO Box 70992, Ndola, Zambia.*
9K2CX	*PO Box 19593, Haitan, Kuwait.*
E0ZAD	*PO Box 3016, Valparaiso, Chile.*
C21BD	*PO Box 225, Nauru, Central Pacific.*
C21RK	*PO Box 139, Nauru, Central Pacific.*
CE7AQK	*PO Box 206, Ancud, Chile.*
CP8IHS	*PO Box 105, Trinidad City.*
EA9CF	*PO Box 410, Ceuta, Spain.*
H5AK	*PO Box 147, Mafeking 8670, Bophuthatswana.*
HZ1AJ	*PO Box 6177, Jeddah, Saudi Arabia.*
JT1KAA	*PO Box 844, Ulan Bator.*
KD8CE/J6L	*PO Box 101, Castries, St Lucia.*
OX5RM	*PO Box 1569, APO NY 09023 USA.*
T77J	*PO Box 1, 1-47031, Republic of San Marino, Italy.*
TZ6BMA	*PO Box 198, Bamako, Republic of Mali.*
W2KW/KV4	*PO Box 7055, St Thomas, Virgin Islands.*
YK1AO	*PO Box 245, Damascus, Syria.*
ZK1CG	*PO Box 618, Raratonga, South Pacific.*
ZK2RS	*PO Box Niue Island, South Pacific.*

QSL VIA

3D6AK-*G3WPF*, 4K1QAV-*UA1QAV*, 5R8AL-*WA4VDE*, 5Z4MX-*SM3CXS*, 6U0WCY-*DF7ZH*, 6UIWCY-*DF7ZH*, 6W8HL-*WA4VDE*, 6Y5IC-*G3XTJ*, 6W8FZ-*DJ7BG*, 9G2XX-*AK3F*, 9Y4NP-*W3HNK*, AH9AA-*KW6HF*, AX2ITU-*VK2WI*, AX3ITU-*VK3AH*, C31XO-*F6GOW*, C31ZQ-*I1FQH*, CE0AE-*WA3HUP*, D68AM-*WB2OHD*, EA9KF-*EA9IE*, ED1ILT-*EA1MC*, EK9C/0-*UK9CAE*, EK9D/1-*UK9CAR*, F2JD/TR8JD-*F6AJA*, F6ERH/TR8YL-*F6AJA*, FG0HUL/FS-*N3CQM*, FP0HSH-*KC8A*, FP0HSW-*KC6A*, FY0HVL-*F6AJA*, FY0HVM-*F6AJA*, FY7BC-*F9LM*, HC1BP-*N4BPO*, HH2MC-*KB4IT*, HH2SD-*VE3CVZ*, HH2VP-*W1FJ*, J28DT-*DF6AD*, J3AVT-*W8UVZ*, J37AH-*WB2LCH*, J37DF-*N4CRU*, J73JW-*N3AWS*, JD1YAA-*JA1WU*, JD1YAB-*JARL*, JX6RE-*LA9RE*, JX6BAA-*LA7JO*, JY9RC-*W1VBI*, KH6LW/KH7-*KH6JEB*, OF0BA-*OH2BAZ*, S79ARB-*WA2PPN*, T30AT-*G3XZF*, T30CH-*W9SLT*, TJ1AF-*N4IAM*, TO5RV/FC-*F5RV*, TR8DX-*WA4VDE*, TR8MYA-*JA8ATG*, VK3WCY-*VK3ER*, VK9ZS-*VK6YL*, VR6KY-*LA7JO*, VR6TC-*W6HS*, XT2BG-*F2BS*, YP3A-*YO3KAA*, ZD9BV-*W4FRU*, ZD9BX-*KA1DE*, ZD9YL-*W4FRU*, ZL1-9WCY-*ZL2HE*, ZL2BJE/C-*ZL2HE*, ZL4DE/C-*ZL2HE*, ZP0PX-*W3HNK*, ZP5XDW-*N4DW*.

WORKED ON THE EAST COAST

14 MHz
1S1CK, 1Z9B, 3B8DB, 3B9DA, 3V8PS, 4S7EA, 4U1UN, 5B4JE, 5H3DM, 5N3RTF, 6W8AR, 6W8DS, 7Q7LW, 8Q7AV, 9H1EU, 9N1MM, AH2AN, AH9AA, AX2WCY, AX3ITU, BV2B, BY1PK*, C21BD, C21RK, CE0ERY/Z CE2EVG/CE0Z, CO2OM, CR1LN, CR4NH, CT2FH, CT4TK*, CY6CNJ, CZ1BK, D44BC, DF7WCY, EA6NB, EA8AFB, EA8AFS, EA8BF*, EA8BS, EA9IE, EA9JE, EI4ARL, EL2AD, EL2BE, FB8ZG, FG0HUL/FS, FG7BT, FM7CD, FO8DL, FR7ZN, GW3AX, HA1XR*, HB9AYX, HH2JD, HH4SA, HI8GB, HK5500, HP1XN, HZ1AB, J20WYC, J39CM, JW4GN, JX6BAA, JY7CL, KG4DX, KH6LW/KH7, KX6PO, PJ7ARI, PY1EFM/PY0T, S83H, T70AE, TL8CK, TL8ER, TO5RV/FC, TR8CR, TR8GM, TR8IG TT8AD*, TU2JL, UG6GAF, V2AR, VE6CCO*, VK0VK, VP2MDG, VR6TC, W6LAS/SV/A, WH2ADG, YI1BGD, ZB2HO, ZB2J, ZD7BW, ZL3PO/C, ZS3GB.

* Denotes CW operation.

3.5 MHz
K6EID, TI5EWL, YJ8RG, ZL40Y/C.

28 MHz
AX3ITU, C21BD, KC6IN, KH6HR, SV3RF, T30AL, UB5IQA, WH2ADG, YU7KMN.

21 MHz
1S1CK, 5W1DZ, 6Y5IC, AX3ITU, C21BD, CO6KW, CY5AFA, H44SA, VU2AUS, ZK2JS, ZL4PO/C, ZS3PG.

WORKED ON THE WESTCOAST

(1.8) ZL40Y/C*, (14) HV3SJ, (28) ZD7CW, (7) 4K1B*, (7) 4U8ITU*, (7) 9Y4VU*, (7) PJ7ARY, (7) VG6GAI*, (7) VP9DR*.

() Denotes frequency in MHz.
* Denotes CW operation.

CW SWLing with Eric L30042

28MHz
BY7PO (0700 UTC), HL5GZ, JH8FQF, UK5MAF.

21 MHz
BY1PK, BY8AA, DL0VN/P, EA7CMP, F6HAD, FK0AD, G3YDX, HA5KDQ, HL0C, KC6YA, KH6OZ, KP4CC, OH1XT, SM6LJU, TT8AD, UK0JAA, CY7EIE, KT7H/M, XE2MX, YC2BDJ, YJ8KG, ZS1H, ZS4U, ZS6ARK, 5W1EJ.

14 MHz
FK8EH, FO8DP, FY7BO, HL1CX, KP2J, KX6QO, SP2JS, T30AT, UI8OK, N6YK/V2A, CY7WJ, TO7GAS, YB0AFA, YV5DEK, 9M2MO.

10 MHz
A35MS, DL1SV, F3NB, FB8ZQ, G4OYC, GM3GJB, JA6HW, AL7B, KP2J, OK2BFX, OZ4CB/A, VE3QU, VE5XU, VE6UM, DL2GG/YV5.

7 MHz
CO7RM, CT3DJ, DJ0GP, EA2OP, FB8ZQ, HA5KKK, HB9AUQ, HI3PC, KL7Y, LZ1KDP, ON7HE, SP2JKC, UK2PCR, UB5ADN, UA9YAE, UK1QAV, UK7LAA, CY3KUC, VK9NC, VP2MM, YO3NP, YU4FDE, ZS6CK, Y51ZE.

3.5 MHz
G3LZT, KL7AF, SM6CPY, UK2BBB, UK0ICO, UK4WAB, VK9NS, W5RK, KY0S.

1.8 MHz
VK5(4), VK9NS, ZL1HY, ZL2AVK.

QLSs received by Eric L30042

3D2ER, 3D2MK, 5Z4CV, 9J2LL, 9U5WR, A4XJP, W6KG/A7, BY8AA, ZL3TZ/C, ZL4GF/C, DL1KS*, DL6RX*, DJ6TK*, DL9MK*, F6ARC*, FM7AV, G3NWG*, G3TWG*, GI5OQR*, HB9AMO*, HB9DX*, HL1HV, J20DU, JA8AQN/JD1, JR1EBE/JD1, KH60A, LU1UG (28 MHz beacon), OE3GW*, W2BBK/PJ7, UD6DLK, UQ2GLR, VP9BA (28 MHz beacon), VK9NC, ZF2FR, ZB2G, ZK1XX, K6DDO*.

* Denotes 10 MHz confirmations.

QLSs received by Steve VK2PS

DU7RLC, FO8IV, C21RK, ZK2RS, KX6PO, 9M2EE, UH8EAD, UA0ZCQ, UA9ULC, UA4CGP, UK3QBS, UK2ABC, UK2FAH, UK1ADK, YO9HP, OH1OO, OH9TJ, OH6BR, OH3FM, YB0AFA, VK9ZA, I2PAH, ZK2WM, FK8EU, HL0Y, HL0SF.

THANKS

Assistance with information for these notes has been forthcoming from amateurs including VKs 2PS, 3BY, FR, PA, UX, YJ, YL, 5GZ, 6FS, HD, NE and Eric L30042. Overseas amateurs who assisted included G3NBC, ON7WW, ZL1AMN. Research from magazines, including BREAK IN, cq DX, CQ, HOW'S DX, DX NEWSLETTER, DX POST, DX PRESS, JAN and JAY O'BRIENS QSL MANAGER LIST, QST, REGION 1, 2 & 3 NEWS and WORLD RADIO.

The closing date for information for the October notes is 23 August.

Thanks to all sources of information.

AR

BUYING, SELLING or WANTING?

Check HAMADS first.
Eight lines free to all WIA Members.

WICEN NEWS

Ron Henderson VK1RH
FEDERAL WICEN CO-ORDINATOR
171 Kingsford Smith Drive, Melba, ACT 2615

At the 1982 Federal Convention the Federal Council prepared a number of policy statements. These were to be ratified by September 1982 by divisions and published, however to my knowledge they have not appeared in Amateur Radio so here is the WICEN and Emergency Communications Statement.

POLICY STATEMENT — WICEN AND EMERGENCY COMMUNICATIONS

Recognising that

- *The obligation on amateur radio operators to respond to emergency transmissions they receive;*
- *The desire of amateurs to offer their services in emergencies;*
- *ITU Resolution 640, which states that certain amateur bands may be used by administrations to meet the needs of international disaster communications;*
- *The frequently unpredictable onset of disaster situations;*
- *The value of training and preparation prior to any emergency or disaster;*
- *The existence of amateur Third Party Traffic Networks (TPTN);*
- *The complimentary nature of WICEN and TPTN and the likelihood of amateurs interchanging between these activities;*
- *The need to accredit amateur emergency communications with disaster control agencies;*
- *The fact that not all amateurs will wish to be actively involved in disaster communications training;*

This Council:

- *Identifies four levels of amateur involvement in emergency and disaster communications, namely;*
  - as an active member of a State Emergency Service (SES),
  - as an active member of the Wireless Institute Civil Emergency Network (WICEN),
  - as an active member of TPTNs,
  - as a responsible operator.
- *Confirms the role of WICEN as* "A pool of trained licenced operators with equipment, available for deployment by a disaster control agency to aid communications in an emergency",
- *Indentifies the emergency or disaster role of TPTNs as* "Provision of communications for the general public within the terms of prevailing regulations and licences";
- *Seeks co-ordination between WICEN and TPTN. The Federal WICEN Co-ordinator is directed to initiate such actions in the first instance;*
- *Sees a requirement for WICEN training and exercises together with exposure of other amateurs to WICEN message handling and voice procedure;*
- *Observes that WICEN message handling and voice procedure should be aligned with that used by the SES for improved inter-operability;*
- *Seeks standardisation of message forms based upon the general format and layout of the SES message form;*
- *Confirms the requirement for declared and publicised WICEN calling frequencies in all the amateur HF bands.*

AR

QSP

BREATHALYZERS AND RF

Four models of breathalyzers produced in America were recently found to be susceptable to radio frequency interference (RFI). When the devices are operated in strong RF fields, test results could contain major inaccuracies.

Questions of the accuracy of these particular machines has resulted in at least one drunk driving case being dismissed in America and the recommendation that state police "temporarily stop using their breathalyzer machines".

Adapted from CQ magazine April 83

AR

Please remember your STD code when you advertise in HAMADS.

INTERNATIONAL NEWS

HIGH HONOUR FOR AUSTRALIAN HEAD OF THE INTERNATIONAL TELECOMMUNICATION UNION (ITU)

A recommendation by the Spanish Council of Ministers has granted the Highest Telecommunication Honour of Spain to Richard E Butler, the Australian Secretary-General of the International Communication Union and Co-ordinator of World Communications Year (1983): Development of Communications infrastructures, as proclaimed by the United Nations.

The award is in recognition of Mr Butler's substantive contribution to the realisation of development through international telecommunications co-operation.

The award was presented to Mr Butler on behalf of His Majestry the King of Spain, Don Juan Carlos, by the Deputy Minister for Transport, Tourism and Communications of Spain, Mr Gerardo Entrena, during celebrations of the 15th World Telecommunication Day at ITU Headquarters on 17 May 1983 — the 118th anniversary of ITU's foundation.

Mr Butler was elected Secretary-General of the ITU by its Plenipotentiary Conference, held at Nairobi in October 1982, and took office on 1 January 1983. He has served as Deputy Secretary-General of the Union since 1968 on being elected, after nomination by Australia. He is seconded from TELECOM (Australia).

AR

CHESS AND AMATEUR RADIO INTERNATIONAL — CARI

CARI is a newly formed international club for people wishing to play chess via amateur radio.

The club is organised by Vince K2VJ, PO Box 682, Cologne, New Jersey, USA 08213, who publishes a quarterly newsletter with details on how to set up local or international games.

You can contact Kevin VK3ASM or Craig VK3CRA both QTHR or check into our local CARI net on Wednesday night 1000 UTC 3.567 MHz and you will be very welcome whether a beginner or an expert.

AR

COMPUTER PROGRAMME FOR STATION LOG AND QSL CARD PRINTING

This programme was provided by M. Mohan, VE6AZM. It is written in BASIC and, with minor modifications can be used on any computer with a BASIC compiler.

A menu is displayed when the programme is run to allow the following choices to be made:

1. *Display log by callsign (displays all QSOs with given callsign)*
2. *Display log by date (displays all QSOs on a given date)*
3. *Enter a new contact (just that)*
4. *Print QSL by a call (prints a QSL for each QSO with that callsign)*
5. *Print QSL by a date (prints a QSL for each QSO on that date.*

```
#   # #####  ###    #   ##### #   #
#   # #     #   #   # #     #  ## ##
#   # ####  ####  #   #   #   # # #
 # #  #     #   # ##### #   #   #
  #   ##### ###  #   # ##### #   #

     AMATEUR RADIO STATION CONFIRMING WITH  AX3AH
A TWO WAY A3 QSO OF 821010 DATE AT 1538 UT ON 14.17
MHZ AND REPORTING 59 RST WITH A 2 ELEMENT HOME-BREW
CUBICAL QUAD. STATION'S ACTIVE  CW FM RTTY SSB SSTV
DATA WAS PRINTED BY MICROCOMPUTER DIRECTLY FROM THE
LOG ENTRIES IN THE MEMORY WITH A HOME-BREW SOFTWARE

KEN PLEASE QSL-/BOX 46 WINTERBURN ALBERTA TOE 2NO
OR VIA VE6 BUREAU,TNX FER THE QSO
```

Mohan

To change the programme to suit your situation change VE6AZM to your call in all places where it occurs, except in line 100. Don't forget lines 918 & 926. Do not enter line 1000 on. Change lines 931, 932, 996 to incorporate your details.

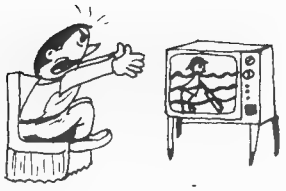
The details of changes to be made for different machines are not given here because, to be reliable, access to all of the major machine types would be required.

At least 4 K of RAM would be required for a useful log. If you are very active you will need more. For example 1000 QSOs may require 64 K of RAM.

AR

```
100  REM ** PROGRAM TO **                              BY M.MOHAN
     REM**  VE6AZM  **
     REM** 1982 **
110  CLS: PRINT "VE6AZM
102   TAB 7: PRINT          AMATEUR RADIO STATION LOG"
104  TAB 7: PRINT   VE6AZM"
105  TAB 1: PRINT
110  PRINT       1.LIST LOG BY CALL': PRINT
115  PRINT       2.DISPLAY LOG BY DATE": PRINT
120  PRINT '     3.ENTER A NEW CONTACT": PRINT
125  PRINT '     4.PRINT QSL BY A CALL': PRINT
130  PRINT       5.PRINT QSL BY A DATE": PRINT
145  PRINT : INPUT       ;F
150  IF F = 1 THEN  GOTO 500
165  IF F = 2 THEN  GOTO 400
170  IF F = 3 THEN  GOTO 700
175  IF F = 4 THEN  GOTO 500
180  IF F = 5 THEN  GOTO 600
200  PRINT "IN VALID,RE-ENTER": GOTO 140
300  REM +ENTER A NEW CONTACT+
302  PRINT : PRINT
304  LIST 1000 - : PRINT : INVERSE : PRINT ' ENTER DATA & SAVE -  VE6AZM L
     IST '; NOR AL : PRI
305  REM
400  REM +DISPLAY LOG BY DATE+
402  PRINT : PRINT
404  INPUT "1ST. DATE  YYMMDD ) -  ',N1:
406  INPUT "2ND. DATE  YYMMDD  -   ',N2
408  GOSUB 800
412  GOSUB 700
414  IF Z = 999999 THEN 950
416  IF Z    = N1 AND Z    = N2 THEN 420
418  GOTO 412
420  GOSUB 730
422  GOTO 412
500  REM +DISPLAY LOG BY CALL+
502  PRINT : PRINT
504  INPUT "ENTER CALL -  ';N$: GOSUB 800
506  GOSUB 700
508  IF A = 999999 THEN 950
510  IF N$ = X$ THEN 514
512  GOTO 506
514  GOSUB 720
516  GOTO 506
550  REM +PRINT QSL BY A CALL+
552  PRINT : PRINT
557  INPUT "ENTER CALL -/ ';L$
555  GOSUB 700
556  IF A = 999999 THEN 950
557  IF L$ = X$ THEN 559
558  GOTO 555
559  GOSUB 910
560  GOTO 555
600  REM +PRINT QSL BY A DATE+
602  PRINT : PRINT
604  INPUT "1ST. DATE (YYMMDD) -> ";D1
606  INPUT "2ND. DATE (YYMMDD) -/ ";D2
612  GOSUB 700
614  IF Z = 999999 THEN 950
616  IF Z    = D1 AND Z <  = D2 THEN 620
618  GOTO 612
620  GOSUB 730
622  GOTO 612
700  REM +READ DATA+
702  READ A:Z = A: IF A = 999999 THEN 950
704  READ A$:V$ = A$
706  READ B$:X$ = B$
708  READ C$:W$ = C$
710  READ D$:U$ = D$
712  READ E$:S$ = E$
714  READ F$:T$ = F$
715  READ G$:R$ = G$
716  READ H$:R$ = H$
717  READ I$:O$ = I$
718  READ J$:P$ = J$
719  RETURN
720  REM +DISPLAY DATA+
722  PRINT A;'  ';V$;'  ';N$;
727  PRINT  TAB( 23)W$;" ";U$;" ";S$;" ";T$;' ";S$;" ";R$;" ";: PRINT  TAB(
     2 5);'  ';F
730  RETURN
800  REM  ++REPORT HEADER++
801  HOME
802  PRINT   DATE  TIME  CALL      MHZ  EM  RST  QSL'
804  FOR N = 1 TO 39: PRINT '-';: NEXT N: PRINT '-'
806  RETURN
900  REM +PRINT A   SL CARDS+
904  GOSUB 700
906  IF A = 999999 THEN 950
907  IF S$ = "N" THEN 910
909  IF R$ = "Y" THEN 612
910  PRINT
912  PRINT  -                                                    -
916  PRINT ' FRI '
918  PRINT '     #   # #####  ###    #   ##### #   #'
920  PRINT '     #   # #     #       # #      #  ## ##
922  PRINT '     #   # ####  ####  #   #   #   # # #'
924  PRINT       # #  #     #   # #####  #   #   #
925  PRINT '      #   ##### ###  #   # ##### #   #'
926  PRINT : PRINT
928  PRINT       "AMATEUR RADIO STATION CONFIRMING WITH  ';X$;'"
930  PRINT 'A TWO WAY ';U$;' QSO OF ';Z;" DATE AT ';V$;" UT ON ';W$;'
931  PRINT 'MHZ AND REPORTING ';U$;" RST WITH A 2 ELEMENT HOME-BREW"
932  PRINT "CUBICAL QUAD. STATION S ACTIVE  CW FM RTTY SSB SST'
937  PRINT "DATA WAS PRINTED BY MICROCOMPUTER DIRECTLY FROM THE"
934  PRINT "LOG ENTRIES IN THE MEMORY WITH A HOME-BREW SOFTWARE'
935  PRINT
936  IF R$ = "N" THEN  PRINT ' ';P$;' PLEASE QSL-/BOX 46 WINTERBURN ALBERTA
      TOE 2NO": PRINT 'OR VIA VE6 BUREAU,TNX FER THE QSO'
937  IF R$ = "Y" THEN  PRINT 'TNX FER  R QSL CARD  ';P$;'"
938  PRINT                                          --... ...--'
939  PRINT
940  PRINT
945  REM
950  TAB 27: PRINT : INPUT "TO RESTORE ENTER 0 -  ";M
955  IF M = 0 THEN  RESTORE : GOTO 100
960  PRINT 'INVALID,RE-ENTER": GOTO 950
999  END
1000  DATA  800105,0145,RZ3AHA,14.20,A3,57,53,N,N,0152,VLAD
1001  DATA  800105,0155,RK2AAG,14.20,A3,57,57,N,N,0157,ALEX
1002  DATA  800113,2325,CE3BPC,21.34,A3,57,57,N,N,2328,JIM
1003  DATA  800120,0401,WB2PTH,14.23,A3,59,59,N,N,0404,STU
```

NATIONAL EMC ADVISORY SERVICE



Tony Tregale VK3QQ
NATIONAL EMC CO-ORDINATOR
38 Wattle Drive, Watsonia, Vic 3087

"A WARNING FROM CANADA"

Australian amateurs beware — this could happen here! The psychology behind this Canadian situation could have far reaching consequences in other areas of electronics and electronic communications. It is very easy for us all to be sold down the river by profit orientated entertainment entrepreneurs and big business.

The ubiquitous presence of electrical and electronic equipment in todays living has benefited mankind immeasurably, but we are paying an ever increasing price for this service, not only in monetary terms but in terms of Electromagnetic Interference. The very use of this equipment is causing ever increasing interference, and in consequence, social and legal problems.

Cable TV interference is not a new kind of interference. We have had it since the first day cable TV systems were built in Canada almost thirty years ago. But it is new for amateur and other radio services beginning the day cable TV system began to use mid-band and super-band frequencies. It is due to leaks in cable TV systems which allow signals in the cable to leak out and interfere with radio systems on the outside. Of course, those same leaks make the cable system susceptible to interference leaking into the cable.

In years gone by, whenever amateurs had interference problems, only the complainant (most often a private individual), the amateur and DOC were involved. With a little co-operation these problems were quickly resolved. However, amateurs and amateur clubs involved with cable TV interference problems will have to play an entirely different ball game.

The opponent is a company rather than an individual; two umpries with different objectives in mind will do the judging, and the corrective measures will be very costly and time-consuming to implement. Amateurs can win if they are prepared to understand the game and take advantage of all the opportunities that it creates.

Cable TV systems are regulated under the Radio Act by the Department of Communications which grants Technical Construction and Operating Certificates, and under the Broadcasting Act by the Canadian Radio-television and Telecommunications Commission which grants licenses. According to the two Acts, the license has no authority unless both the Technical Construction and the Operating certificates are valid. **Therefore, the Department of Communications has the power to close down a cable system if a case of interference were not resolved. HOWEVER, DOC WOULD BE VERY RELUCTANT TO DEPRIVE A CITY OF UMPTEEN CHANNELS OF TV.**

This is where we arrive at the psychological situation – *"How much chance would the Amateur Service have against a whole city?"* The catch 22 is, that once a system, or equipment, of this nature is allowed to get a foot in the door it becomes a creeping disease which is protected by its consumers, while its controllers sit back and relax all the way to the bank . . . We should remember CB which caused the DOC an awful problem, while providing the entrepreneurs with a pot of gold.

There is no easy answer to this "catch penny" situation, however, the Amateur Service can help to ensure that the promoters of such systems and schemes do not sneak through our back door by, each and every member of the Amateur Radio Service, doing his or her best to continually monitor all trends and events in the world of commercial communications and electronics.

To see what opportunities are available for amateurs to get a case of Cable TVI resolved, we should start by familiarising ourselves with both of the authorisation processes.

Proofs of performance are important. They show the DOC that *"the system performance is essentially meeting standards of the Department"*. Broadcast procedure 23 sets out the standards (including the radiation standard) and how they are to be measured. A proof has to be submitted one year after a system commences operation and one year prior to the expiry date of the Certificates. Again, we have a loophole! Once the system has started serving consumers, it's virtually impossible to shut it down . . . *"Remember Channel O and 5A?"*

It is essential that you know the radiation limits that the Cable Company has to meet and how they are measured. Because leakage in the 2 metre band from a cable system which meets the DOC standard (10 microvolts per metre at three metres from the cable) will result in a receivable signal in modern amateur equipment sixty feet from the cable, one cannot assume that, since a signal is received, the standard is exceeded . . . Another warning for Australia! . . . Therefore, the leakage from the cable lines must be measured at a number of locations throughout the interference area to confirm that the leakage exceeds the DOC requirements.

It is a time-consuming task but, because DOC inspectors may not have time to do the investigations . . . *"Another warning for Australia!"* . . . there may be no alternative. Be sure the carrier measured comes from the cable and not directly from some distant transmitter. Test equipment (receiver, transmission line and antenna) should be calibrated. You may be pitted against a Cable Company and/or DOC engineer on the matter of measurements and you will want to have a good case technically.

Now, equipped with measurements that prove interference, you can go and talk to the cable company to get them to repair the leaks . . . some hope, based on USA experience. If they are reluctant, bear in mind that locating and repairing the leak can cost many thousands of dollars, especially if the system is not well maintained.

The Canadian Cable Television Association recognizes that leaks result not only in interference to, but also make a cable system susceptible to interference from, other radio services. Leakage is therefore of concern to the Association and its members. The Association has produced a "Radiation Monitoring Handbook" to assist member companies. Included in the handbook is advice on how to monitor a system for radiation leaks, measure radiation and locate leaks. Technical help is also available to the companies from many other sources. Accordingly, amateurs should not become involved in any more than helping cable technicians locate leaks.

Amateurs should not overlook another complication. House and apartment building "wiring" when improperly done, can cause terrible interference problems and, depending on who owns and maintains the distribution system in the building, may be beyond the control of the cable company.

At the present time, the Australian Department of Communications is attempting to administer the finite electromagnetic spectrum with grossly inadequate mandatory legislation, and an inadequate number of staff to properly supervise the use of one of our most important natural, and extremely vulnerable resources.

This warning from Canada is an illustration of the vulnerability of government control bodies when they are involved with com-

mercial interests and high, often international, finance. It is most important that our legislators understand and cater for, in the Bill, this absolutely disastrous form of "catch 22".

Members of the Amateur Service should, in the interest of the continued well being of our Service, keep a very close watch on this psychological/financial manoeuvring by those in society who are concerned only with profit . . . Remember, cable TV was used here only to illustrate this potentially disastrous situation. The psychological implications can equally apply in many similar areas — *"Let us heed the warning from Canada"*.

Acknowledgements to
TCA MAGAZINE and VE3NR

AR

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NOTICE

DEADLINES FOR NEXT ISSUE

All copy for OCTOBER Magazine must ARRIVE at Federal Office by the 25th AUGUST.

COMMERCIAL CHATTER

STEWART ELECTRONICS OPENS NEW STORE

Due to an ever increasing demand and requests for an outlet closer to the city and western suburbs Stewart Electronics has opened a new sales outlet at 437 City Road, South Melbourne. The new store will carry the same range as the Huntingdale head-office and will be well supported with daily distribution of stock. Callers are most welcome and full counter/cash sale facilities are available.

AR

GFS MOVES QTH

GFS Electronic Imports have moved to new premises at 17 McKeon Road, Mitcham, Victoria. (Next door to their old shop).

Due to Greg's ever increasing overseas franchises the previous location was becoming too small. The new store has a larger display area with an ever increasing range of goods.

Call in and inspect the new premises. Greg and Alf will make you most welcome.

Note: Postal address and telephone number remain the same.

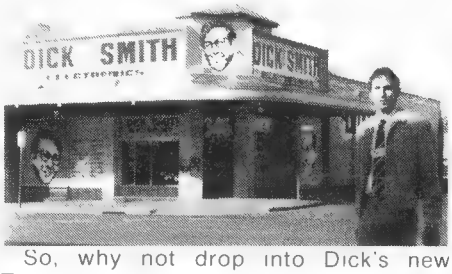
AR

DICK SMITH OPENS IN TOOWOOMBA

As a convenience to our many customers who live in the Darling Downs area, the important retailing centre of Toowoomba, Queensland has become the host for the latest Dick Smith Electronics store.

Now Toowoomba's electronic enthusiasts (and enthusiastic beginners as well) will have, at their doorstep, everything from components to kits, home computers, telephone products, HI FI equipment, electronic games, etc.

Located at the corner of Ruthven and Bowen Sts, the phone number is (076) 38 4300. Toowoomba store manager, Brian Marney (pictured here), and his specially trained staff are looking forward to serving you.



So, why not drop into Dick's new Toowoomba store, have a look around and take advantage of the fantastic specials and direct import prices.

AR

Below — GFS Electronics' new show room.

GFS Electronic Imports

15 McKeon Road, Mitcham, Victoria, 3132
PO Box 97, Mitcham, Victoria, 3132 Phone: (03) 873 3939, 873 2652
Telex: GFS AA 38053 Cable: "Comimports" Melbourne

NEW
2.3 GHz Microwave Downconverter Kit. Price $89

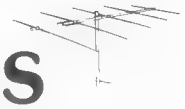
The RX-2300 includes all components, teflon PCB, case and BNC connectors. May be tuned to any 30 MHz segment between 1.69 and 2.7 GHz. Included in this range are Weather Satellites, NASA Space Shuttle TV and Audio, NASA beacon on the moon.

1983 callbooks

NOW READY!

US CALLBOOK $26 + $3 P&P
FOREIGN CALLBOOK $25 + $3 P&P

ATN ANTENNA'S



GFS keep the ATN range of HF, VHF and UHF beams. Write for a brochure on the full range.

NEW BROAD BAND VHF/UHF BEAMS

LOG-S, 100 to 520 MHz Log Periodic Beam, 9 element 1.02 metre boom, 9.5 dBi gain, 200 Watts $89 + 10 P&P

LOG-SP, 65 to 520 MHz Log Periodic, 13 elements, 3.07 metre boom, 11.5 dBi gain, 200 watts. $125 + $10 P&P

COME AND CELEBRATE WITH US
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SQ-61 6 metre SWISS QUAD'S 12dBD gain.
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ONLY DURING AUGUST.

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103 SAX MEDIUM DUTY $235 + $10 P&P
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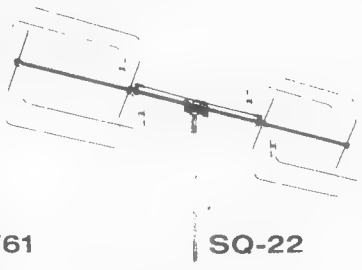
SHORTENED TRAPPED DIPOLE FOR 80, 40 & 20 METRES

A-248D Approx 60 ft long, includes wire, insulators and traps. **$93 + $7 P&P**

SQ-10/15/61


SQ-22

We also stock HF, 2 metre on 70 cm high performance SWISS QUADS. Write for details.

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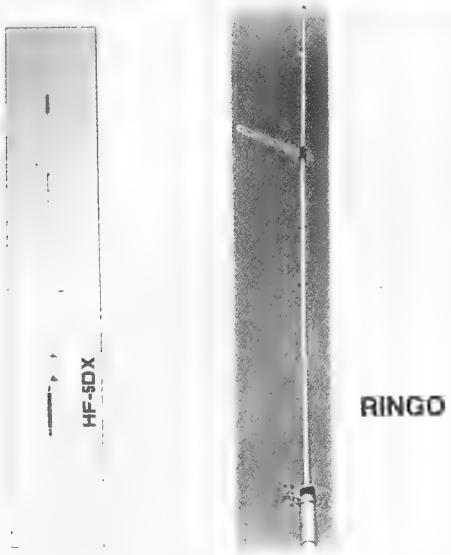
PO Box 97, Mitcham, Victoria, 3132 Phone: (03) 873 3939, 873 2652
Telex: GFS AA 38053 Cable: "Comimports" Melbourne



HF-5DX Self supporting trapped vertical complete with self supporting radials. Needs no guys. Covers 80, 40, 20, 15 & 10/11 metre. **$187 + $10 P&P**

2 metre RINGO, 9 dBi gain omnidirectional vertical antenna. $60 + $10 P&P

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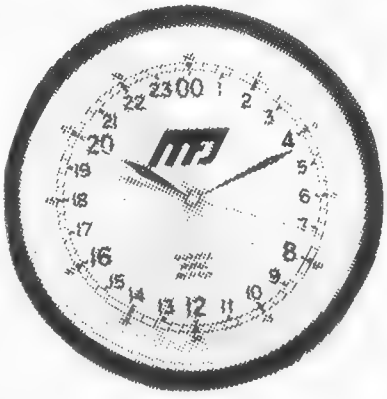

MFJ-105 $125 + $6 P&P

True 24 hour quartz wall clock has huge 12 inch diameter face. Gives excellent visability across computer/radio room.
Fifteen seconds per month accuracy.

Single "AA" battery provides over one year operation, immunity from power line failure and eliminates power cord.

Sweep second hand. Brown hi-impact case. Glass front. 24 hour military time format.

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AFSK MOD-DEMOD FOR RTTY, ASCII, 45 to 1200 BAUD

MODEL MDK-17 KIT

* Interfaces directly to baudot Type Machines. * Provides for all Combinations of TTL or high voltage send-receive systems. * Only single + 12V Supply required. A high Gain Amp/Limiter and active band pass filter precede an XR2211 Demod I.C. * Good Data recovery is assured, even under difficult conditions * Excellent temperature stability is provided by an XR2206 I.C. in the tone generator. * Sense invert capability * LED indication of transmit tones, receiver tuning and valid signal. * Auto start output available (TTL). * Supplied with comprehensive documentation.

MDK-17 Kit $106 + $10 Airmail, Assembled and Tested $161

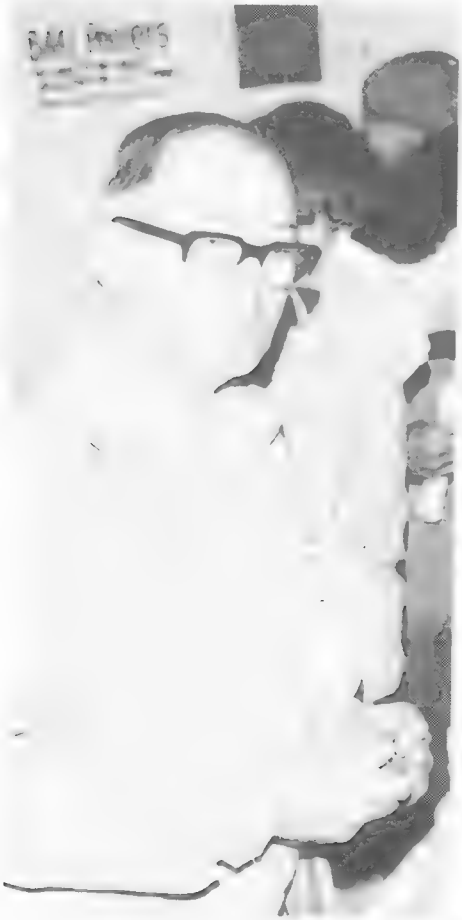
PERSONALITIES ATTENDING THE MT GAMBIER CONVENTION

Beven VK5TV.

David VK5KK.

Harry VK3XI.

Woody VK3AGD.



Eric VK5LP.

Ian VK3BUF.

David VK5ZOO

Duncan VK3LZ demonstrating ICOM gear at the Convention.

Ron VK3BEE.

Don VK5ZOD/NOD presenting the Club Trophy to Greg VK3BGW.

WIN A VHF CONVERTER COMPETITION

GFS Electronic Imports of 17 McKeon Road, Mitcham, Victoria have kindly donated a MFJ VHF Converter for the lucky WIA member whose name is drawn from the correct entries submitted.

The converter allows you to listen to Rural Fire Brigades, VHF Marine & Coastguard and allows you to enjoy all the benefits of your handie-talkie such as scanning, programmability, frequency readout, excellent sensitivity, selectivity, stability, limiting and AM rejection. A great prize.

Post your entry today.

ANSWER THIS QUESTION

What has twice as many edges as it has sides and two thirds as many corners as it has edges. It also has twenty one markings.

RULES

The contest is open to all members of the WIA, with the exception of all people and their immediate families associated with the production of Amateur Radio. One entry per member, each entry to be hand-written on the back of a standard Australia Post approved small envelope.

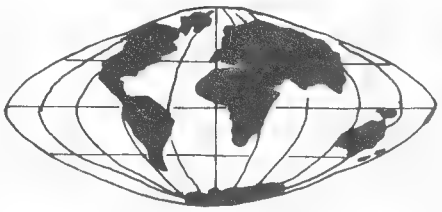
Entries must be received no later than the last mail, Friday, 30 September, 1983 and the winning entry will be the first correct answer drawn by the Editor of AR, on the 4th October.

The Editor's decision will be final and no correspondence will be entered into regarding the decision. Results will be published in November AR.

All entries to: AR Competition Box 300, Caulfield South, 3162. On the back of the envelope your name, address, callsign and the answer to the problem.

Only entries in the above format will be accepted. All others will be disqualifed.

Lionel VK3NM enroute to Mt Gambier with a drowned engine.



VHF UHF - an expanding world

Eric Jamieson VK5LP
10 Quinns Road, Forreston, SA 5233

All times are Universal Co-ordinated Time, indicated as UTC.

AMATEUR BAND BEACONS

FREQ	*CALLSIGN*	*LOCATION*
50.005	H44HIR	Honiara
50.008	JA2IGY	Mie
50.020	GB3SIX	Anglesey
50.060	KH6EQI	Pearl Harbour
50.075	VS6SIX	Hong Kong
51.020	ZL1UHF	Auckland
52.013	P29SIX	New Guinea
52.100	VK0AP	Macquarie Island
52.200	VK8VF	Darwin
52.250	ZL2VHP	Palmerston North
52.300	VK6RTV	Perth
52.320	VK6RTT	Carnarvon
52.350	VK6RTU	Kalgoorlie
52.370	VK7RST	Hobart
52.420	VK2RSY	Sydney
52.425	VK2RGB	Gunnedah
52.436	VK3RMV	Hamilton
52.440	VK4RTL	Townsville
52.470	VK7RNT	Launceston
52.510	ZL2MHF	Mt Climie
144.400	VK4RTT	Mt Mowbullan
144.420	VK2RSY	Sydney
144.465	VK6RTW	Albany
144.475	VK1RTA	Canberra
144.480	VK8VF	Darwin
144.550	VK5RSE	Mt Gambier
144.600	VK6RTT	Carnarvon
145.000	VK6RTV	Perth
147.400	VK2RCW	Sydney
432.410	VK6RTT	Carnarvon
432.420	VK2RSY	Sydney
432.440	VK4RBB	Brisbane
432.450	VK3RMB	Mt Bunninyong

No changes appear in the beacon list this month.

Last month I mentioned the unusual consistency of VK5RSE on 144.550 and operating from Mount Gambier, in that it is always available at this QTH. On the Monday following the SERG Convention at Mount Gambier, Peter Becker VK5KBF invited me to inspect the beacon site, so I was duly directed to a building on a small rise at Glencoe, about 23 km north west of Mount Gambier, and there it was! To say I was surprised would be an understatement! The antenna is a horizontal dipole joined to the chimney of the house with an ordinary TV mast about 2 m long and the co-ax goes down the chimney to the equipment cunningly hidden inside. The beacon is beautifully made with all the usual protection circuitry and a few other things besides. The site barely clears the surrounding pine forests but despite all this, it is reliable, and serves its purpose as a beacon very well. Any directivity which might exist from the antenna would favour both Adelaide and Melbourne!

SIX METRES

Gil VK3AUI phoned to report that on Saturday 18th June Peter VK0AP at Macquarie Island worked Stan VK3VD who was at his Allambee establishment in the Gippsland area at 0425. The beacon at VK0AP was received from 0400 to 0500. At the same time ZL TV was noted, also a signal from Chatham Island, so it is apparent some form of enhanced propogation from that south-easterly direction enabled the contact to be made with Peter. Stan was unable to raise any other 6 metre stations either locally or elsewhere.

Graham VK6RO has sent a copy of the May 1983 Japan "Ham Radio" magazine which contains some interesting information. Again my Japanese is not good but I decipher the following. *The Hong Kong boys are really getting into the 6 metre act and Steve VS6XMQ reports the following will be on this year: VS6CT, VS6BT, VS6AL, VS6FX, VS6EL, VS6GW, VS6XLE, VS6XLX, VS6XMP, VS6XLA, VS6XMQ, VS6XLA, VS6XMT and VS6XMU. They will be using 50.110 for CW and this will be the main calling frequency, 50.200 for SSB and 50.300 for FM.*

From the same "Ham Radio" comes advice that 5Z4CS is now QRT. Also some QSL information: *A35GW: PO Box 46, Nukualofa, Kingdom of Tonga; FK8EM: PO Box 1976, Noumea, New Caledonia; CR9CT: Via KB2XS, Rudolf F Lehnert: PO Box 1150, Princeton, New Jersey, 08540.*

The Japanese 6 metre operators continue to work exotic places, and one wonders with the obvious increased level of activity generated by Cycle 21 whether the type of contacts they are having may not continue despite the decline of the cycle, perhaps not as consistent as at the peak, but it is certainly looking good for them, even if not for VK. The report covers the period from March to 24/4/83, and callsigns being worked include all areas of VK, with prominence to VK4 and VK8, ZL1, ZL2 and ZL3, many contacts to New Guinea and other places such as KG6JDX, DU1BN and many others in DU, YC1CHG, H44PT, HS1SD, FK8EM, A35GW, FK1SB, YB0ACB, VS6XMQ, FK0TAA, FK8EB, KC6IN, YB1CS, YB1BZ, YB2BSF, HL4XK, YC2DPY, VS6EL, VS6GW, HL1UH, FK8AX, HL5BAS, YC0VM, HL2AIB, ZK2RS, and many of these were worked on more than one occasion. Whether we are working them from VK or not it still indicates there is plenty of interest in 6 metres around the Pacific yet, hopefully it will continue.

THE MOUNT GAMBIER CONVENTION

On the local scene I have been on leave and the gear hasn't been on other than FM in the car so there is little to report. However, the car took me to Mount Gambier and the South East Radio Group Annual Convention which was very well supported by both VK5 and VK3. The Committee had obviously done a lot of ground work in preparing for the Convention as a very elaborate programme of events had been arranged and taxed the ingenuity of the participants. Some new ideas added much interest to the proceedings, plenty of trade support with many of the latest goodies to look at, or buy. A stall with second-hand material for sale was of interest, and of course the famous SERG tea provided by the ladies on the Sunday night was a winner as usual. Much improved arrangements for the meals was a credit to the organisers and they were able to handle the very large gathering in record time.

VK5 won the SERG trophy again thanks to the efforts of VK5KK, VK5CK, VK5AVQ, VK5ACE, VK5TV and some others. However, the VK3 crews did not disgrace themselves and managed to carry home quite a few trophies. The winner of the home-brew competition was David VK5KK with a 28 MHz transceiver, all solid state. When questioned as to why a dedicated VHF type like he obviously is, should be fiddling around with 28 MHz equipment, David replied, with tongue in cheek, that it was useful to supply 28 MHz energy for VHF equipment!

After the Convention I stayed in the area for a few days and met up with Chris VK5MC at Hatherleigh and had another look at his EME equipment, and was able to observe him operating his 144 MHz equipment via the rhombics on two mornings, unfortunately this time without a great deal of success, although signals were heard from KG6DX well above the noise.

After leaving there, a few days were spent with mother-in-law (to satisfy the petticoat government), and then on to Ray VK3ATN, who, I am pleased to report seems to be getting along pretty well after his accident when his tower collapsed in a gale and he tried to ride it to the ground! He is very busy making antennas for a living, but is still very interested in EME and hopes to get there again in the not too distant future. He is already doing some work on his 15.5 m dish which has been lying around for a number of years. Best wishes for a complete recovery Ray.

I noted also that Steve VK5AIM gave himself a birthday present recently and took his new FT290R on holidays to Victoria, and was able to drag himself away from the repeaters long enough to have a few contacts on the machine using SSB! Steve even worked back to home town Elizabeth on 7.070 MHz (well!!) using the FT-7! 114 and 432 from NSW.

Gordon McDonald VK2ZAB has written with some further news of his many VHF exploits during May. He says *"Looking at my log I find there is too much in the beyond 200 km category to write about! I have made 108 contacts over 200 km and I know of many others made between other parties. So where do we start?*

Photograph by Gil Sones VK3AUI

North East Radio Group, Greg Williams VK3BGW holds the Club Trophy for group performance by a club, surrounded by members, YLs and YFs.

"I therefore report on contacts which are significant because they are either beyond 400 km or else have some other point of interest:

"1. Contacts, Sydney to Melbourne on 2 metres: Doug VK3UM and I have managed to pass callsigns and signal reports on 6 occasions during May. This path is just short of 700 km. Signals are generally S1 but occasionally and briefly go to S2-3, except for meteor pings.

"2. Contacts, Canberra to Melbourne on 2 metres, 460 km. Ralph VK1RK has made contact with Doug VK3UM on numerous occasions. Glen VK1KAA has also worked VK3UM several times. VK1RK also worked VK3ZHP on 27/5.

"3. Sydney to Bendigo, 2 metres, 614 km. I worked VK3XDP on 6/5, Peter was 5/3 here and gave me 5/4.

"4. Other significant contacts on 2 metres: VK2ZAB to VK2YEZ 474 km, 2/5, 11/5, 18/5, 23/5. John is at Griffith. VK2ZAB to VK2XDH 356 km, 6/5, 7/5, 21/5, 27/5. Doug is in Armidale and the Channel 5A translator limits his operating time to early mornings and this limits my operating times to weekends. VK2ZAB to VK2DSM, 10/5, 11/5. Bob was portable at Mt Caputa, 368 km. VK2ZAB to VK2ECC 520 km, 13/5, 18/5, Doug is at Yetman. VK2ZAB to VK2ZDY, 474 km, 6/5, 20/5, operator is Dave. VK2ZAB to VK2MQ, 474 km, 13/5, 16/5, 17/5, 20/5, 23/5, Graham. VK2KAY to VK1VP 11/5, 17/5, to VK1RK on 17/5 and VK1KAA also on 17/5, all Gunnedah to Canberra at 486 km.

"5. On 432 MHz: VK2ZAB to VK2KAY 300 km, 1/5, 17/5 and 27/5. VK2ZAB to VK1VP 260 km 5/5 and 21/5. These contacts indicate VK2KAY and VK1VP have good receivers as VK2ZAB is running 10 watts! VK2KAY to VK1VP 486 km, 11/5 and 17/5.

"General and conclusions: Country NSW stations equipped with 70 cm SSB include VK2KAY, VK2XDH (Armidale), VK2ADY (Tamworth) and VK2DOA (Narrabri). The Griffith gang have 70 cm but are repeater bound. Moves are afoot in VK1 to try the path to Melbourne on 70 cm.

"On 2 metres VK3UM has run a CW call several times and has been heard in Sydney by VK2AAS, VK2BKQ, VK2ZRU, VK2ZHT and VK2ZAB. He has been heard in Gunnedah by VK2KAY and in Narrabri by VK2AKU and VK2DOA.

"Brian VK2AKU in Narrabri and Darcy VK2KAY in Gunnedah are running 2 metre skeds to Brisbane and northern VK4. Others in Melbourne are turning their beams north, with VK3ZBJ and VK3XQ coming to mind. Where are the VK7 SSB stations?"

Thanks for a very newsy letter Gordon and you make us quite envious down here. It seems Channel 5A has effectively eliminated all 2 metre operation from Western Victoria which often started contacts which eventually ended up in Melbourne for those in VK5. We now seem to be almost as isolated as VK6!

As if all the above wasn't enough, another letter has come from Gordon VK2ZAB with some more hot news. *"Working near the shack on 5/6 a CQ call came up on 2 metres, turning out to be Garry VK3ZHP, who was 5/3 in Sydney, later rising to 5/5, at 2345 (4/5 UTC time). After establishing contact we both paused to allow other stations listening to call in, but no takers. Tried 70 cm but no joy. Using other means we called in some other stations in both cities and this resulted in several Sydney to Melbourne contacts, viz: VK2ZAB to VK3ZHP, VK3BKF, VK3UM; VK2ZRU to VK3ZHP, VK3UM; VK2ZHT to VK3ZHP, VK3BKF.*

"Canberra stations VK1RK, VK1KAA and VK1ZQR also worked the Melbourne boys. I also had a scratchy contact with Peter VK3ZDP in Bendigo. Another station with a callsign which appeared to end in JJ was also heard in Sydney. All so strange, a few weeks ago it had never been done before, now it is becoming commonplace!"

Well, it's always been said you have to be in it to win it, and it would appear the general overall viligance of some stations is paying off, and others are reaping the side benefits! Maybe it will be a time soon for Sydney and VK5 to make it again, it certainly is quite a few

years since I last worked into Sydney on 2 metres but would certainly like to do so again. Have 160 watts to a pair of 13 element yagis at 24 m and a 3SK97 masthead pre-amp for starters, but the QTH is rather poor, but always willing to try!

THE LEAST SUCCESSFUL VET

Although not strictly amateur radio I was quite tickled by the following in the June 1983 "Propogator" of the Illawarra Amateur Radio Society.

"In the course of his duties in August 1977, a Dutch veterinary surgeon was required to treat an ailing cow. To investigate its internal gases he inserted a tube into that end of the animal not capable of facial expression and struck a match.

"The jet of flame set fire first to some bales of hay and then to the whole farm causing damage estimated at $90,000. The vet was later fined $280 for starting a fire in a manner surprising to the magistrate! The cow escaped with shock." — from the Book of Heroic Failures.

VK2AMW MOONBOUNCE REPORT

"Lyle VK2ALU continues to keep us informed on the progress of the re-installation of the Dapto EME equipment, shifted some years ago from its former location where it was subject to damage from vandals. Currently Lyle reports work is proceeding with the painting of shelving, and Jim VK2DLJ being given the material and working drawings for making up the main part of the dual mode feed horn for 1296 MHz. The low level driver stage for the transmitter is now complete and is giving 2 watts output from 400 milliwatts input. When installed in the drive chain, this will provide more than adequate drive for the power amplifier to give 120 watts output. Most of the mechanical work is now completed on 2 receiving pre-amplifiers of the DL7YC design." From 'The Propogator".

OTHER NEWS

Steve VK5AIM provides me with info from "The Short Wave Magazine" published in the UK. Included this time is a note on 6 metres that Paul G4IJE has set out to work the other thirty nine stations in the UK who have been allotted licences, and so far has found thirteen of them. It didn't take them long to learn the art of crossband contacts to 2 metres, but Paul does things a little differently from most in that on 27/2 he worked DJ5MS 6 m to 2 m crossband meteor scatter! That's playing it hard! Another station OK1OA has built a 6 metre converter and using a dipole taped to a window completed a crossband MS QSO!

This other news section is light on this time as I have been away, hopefully there will be something to report on openings which often occur during June/July most years, next month.

In the meantime, closing with the thought for the month: *"Speaking without thinking is like shooting without aiming"*. 73 The Voice in the Hills. **AR**

Help!! Intruder Watch

CLUB CORNER

MOORABBIN AND DISTRICT RADIO CLUB

RULES FOR THE MIDWINTER FIELD DAY

Operation 0100 to 0600 UTC on 7th August 1983.

Any authorised amateur band above 52 MHz and for section B the 10 metre band.

Any authorised mode of transmission may be used.

All stations must operate in the terms of their licence.

Portable stations must not use public or private mains supply.

Portable stations must at least be 2 km from their home QTH.

Any station may be worked twice during the contest providing that two hours elapsed from the first contact.

Net frequencies or repeaters are not to be used for scoring purposes.

No cross band operation is permitted for scoring purposes.

Scoring portable to portable.

Section "A" VHF

4 points per km for contacts up to 500 km on 52 MHz
1 point per km for contacts above 500 km on 52 MHz
4 points per km for contacts on 144 MHz
12 points per km for contacts on 432 MHz
16 points per km for contacts on 576 MHz
24 points per km for contacts on 1296 MHz

Section "B" on 10 Metres

2 points per contact for stations in your call area on 10 metres
4 points per contact for stations outside your call area on 10 metres

Points for portable to home stations are half the above points.

Any contact with the official station of the Club VK3APC will count as double points for that contact.

Entries will be accepted from any portable station providing that only one operator operates that station at any one time.

Entries are to be in the form of a log extract with all points calculated and totalled and be posted to the Contest Officer, Moorabbin and District Radio Club, PO Box 88, East Bentleigh, 3165 to arrive no later than four weeks after the contest.

The winner of each section will receive an Honorary Membership Certificate of the club and twelve months subscription of the Club Magazine APC.

AR

EMDRC

A combination hamfest and communications exhibition under the title of "Communications Expo '83" will be held in Melbourne's eastern suburbs on 3 September

It will be the largest event of its kind ever in Melbourne and is being organised by the Eastern and Mountain District Radio Club as part of World Communications Year.

The Nunawading Civic Centre, Whitehorse Road, Nunawading, is the venue and the Expo will feature a working Amateur Radio Station, a wide variety of communications technology displayed by emergency services, electronics companies and the army.

VK3WCY will be on HF and VHF from 0930 to 1630 UTC on 3 September from the Expo –but this special callsign will also be on most bands around the clock from 3 August.

The Expo includes foxhunts, RTTY and ATV demonstrations, a homebrew competition, kit-building and JOTA display by the Scout Association, and a host of trade displays.

Box Hill Electric Supply Authority will test any household appliance for safety.

For the keen person a pentathlon of competitions has been arranged with the best aggregate score being the winner.

The events are: Callsign recognition from a taperecorder dogpile, Morse code at a nominal speed but with an increasing level of QRM, time trial — tune and match an antenna, guessing the bands of a row of helical whips, and the final competition is to be decided.

The Expo is for both the communications enthusiast and the general public — make sure you don't miss it.

FOR FURTHER INFORMATION CONTACT: Jim Linton. Ph: (03) 232 3534.

AR

INSIGNIAS

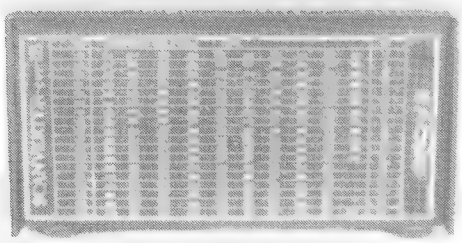
Car Stickers —50¢

Lapel Stick Pins

Metal Car Badges

Prices are available from your division or write to Magpubs, Box 300, Caulfield South, Vic 3162.

AR SHOWCASE



NEW ACCESSORIES FOR JIL SX-200 SCANNING RECEIVER

GFS Electronics recently announced the release of a number of new accessories to suit their JIL SX-200 Scanning receiver. All four are designed to further enhance the already high performance of the scanner which is the only one of its type designed to cover 26 to 88 MHz, 108 to 180 MHz and 380 to 514 MHz AM and FM.

The first, known as the Model CVR-1B Scanverter, allows the SX-200 to cover 216 to 380 MHz. It simply plugs in series with the SX-200s external antenna lead. After adding 12 volts DC the SX-200 has full frequency coverage from 26 MHz to 514 MHz with no gaps except for the 88 to 108 MHz FM Broadcast band. The range 216 to 380 MHz encompasses a number of military frequencies as well as frequencies used by the Space Shuttle crew for direct communication to tracking stations.

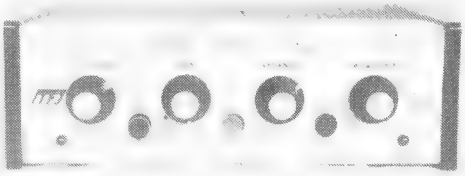
The Model CVR-2 Globscan shortwave converter turns the SX-200 into a broadcast and shortwave receiver. It provides coverage from 550 kHz to 26 MHz enabling the user to receive all normal broadcast stations as well as thousands of overseas signals from shortwave stations. Like the CVR-1B it simply plugs in series with the external antenna lead of the SX-200. Priced at $199 and $189 respectively the CVR-1B and CVR-2 turn the SX-200 into a full coverage programmable receiver from 550 kHz through to 514 MHz with the exception of 88 to 108 MHz.

Also available and designed to increase the JIL SX-200s facilities, are two user assembled and installed kits.

The A4-AM kit allows the SX-200 to automatically select the AM mode whenever it receives and Airband or 27 MHz Marine/CB frequency. The facility is also manually overideable so that the FM mode can be used in either of these bands, if required. The EXP-32 memory expander kit provides the SX-200 with an additional 16 memory channels. With this kit installed a total of 32 memories are available and may be selected in two separate banks of 16 or the entire 32.

Prices are $32 and $53 for the A4-AM and EXP-32 respectively. For full details of all four products contact the suppliers: GFS Electronic Imports, 15 McKeon Road, Mitcham, Victoria 3132. Phone (03) 873 3939, Telex 38053 GFS.

AR



NEW VIDEO ENHANCER/STABILISER

The MFJ-1421 (PAL) is a combination Image Enhancer, Stabiliser and Distribution Amplifier especially designed for the PAL TV System.

It is unique in a number of areas including its built-in Noise Cancel Control. This control overcomes the problem of increased picture noise as enhancement is increased, a problem which plagues most other image enhancers available here.

It also features a built-in Sync Stabiliser for improving video with poor sync, a video gain control which is particularly useful when using the MFJ-1421 (PAL) Distribution Amplifier Section. Also provided is switching for direct bypass of the unit.

Price of the MFJ-1421 (PAL) is $224 plus freight. For further information contact GFS Electronic Imports, 17 McKeon Road, Mitcham, Victoria, 3132 (PO Box 97 Mitcham). Phone: (03) 873 3939.

AR

NEW HIGH GAIN DIRECTIONAL ANTENNAS FOR SCANNING RECEIVERS

GFS Electronic Imports recently announced the release of two VHF/UHF antennas. They are high gain broad band directional types designed for use in a wide variety of VHF/UHF applications, particularly suited for scanning receiver use, and provide excellent performance in fringe areas when compared with a standard discone.

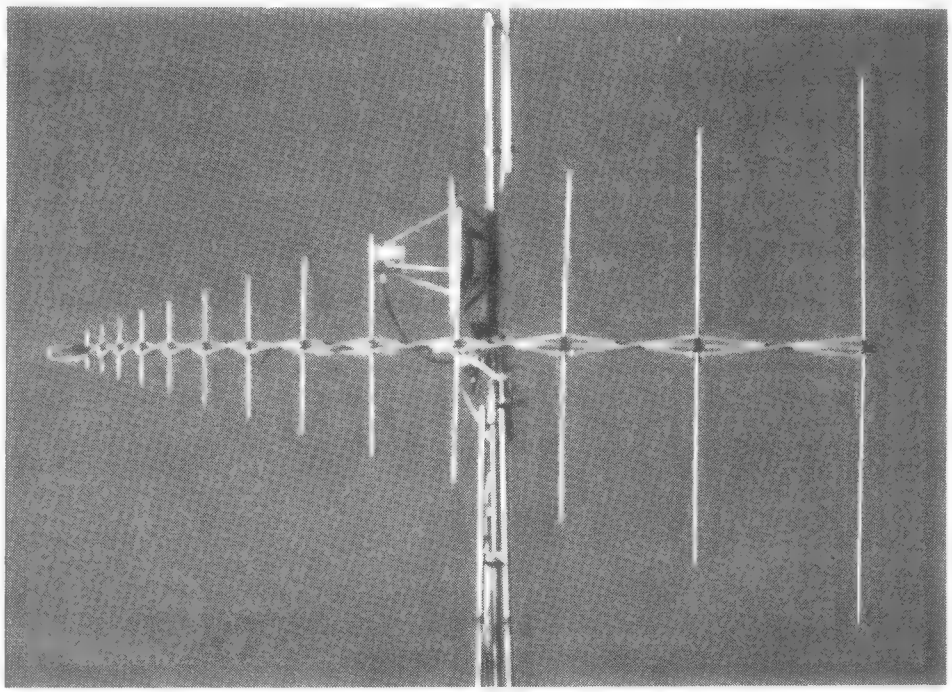
Known as the LOG-S and LOG-SP the new antennas are of the log periodic type. The Model LOG-S has 9 elements with an average gain of 9 dBi and a bandwidth of 100 to 520 MHz. Boom length is 102 metres. The LOG-SP has a bandwidth of 65 to 520 MHz, 13 elements and an average gain of 11.5 dBi with a boom length of 3.07 metres.

Both antennas are also quite suited to transmission applications over their designed bandwidth. Maximum input power handling is 200 watts.

Price of the LOG-S is $89 plus $10 freight and the LOG-SP is $125 plus $10 freight.

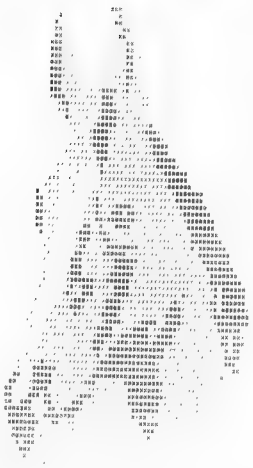
For further information contact: GFS Electronic Imports, 15 McKeon Road, Mitcham, Victoria 3132. Phone (03) 873 3939.

AR



HERE'S RTTY!

Bruce Hannaford, VK5XI
57 Haydown Road, Elizabeth Grove, SA 5112



RTTY picture courtesy Les White, VK5ZW

RTTY OPERATING PROCEDURES

Those who have just obtained RTTY gear are well advised to do a lot of RTTY printing (listening) before going on air. Also it is a good idea to keep off the DX bands until you have got some idea of good operating procedure. One of the first considerations in good RTTY operating is to remember the other fellows equipment may not be the same as yours and consequently you should as far as possible operate in a way that will suit any normal equipment.

If you use a communications computer don't forget many others are using mechanical systems and although your operating procedure may be acceptable to other computer operators it may well be most annoying to those using mechanical systems. Those using mechanical systems should remember computer line lengths are often not the same as theirs, usually only about half their length, so anything set out in columns or any mechanical system RTTY pictures will usually be meaningless on a computer screen.

Both computer and mechanical system operators should realise that although the letters of the alphabet and figures are standardised many of the other miscellaneous signs seen on their keyboards are not standardised and may not print out at the other end in the way you sent them. In addition to letters and figures the following miscellaneous signs are also normally standardised — *full stop . comma , question mark ? hyphen - brackets on and off ( ) oblique stroke / and colon :*. These will usually be received as you sent them. There are many other signs on your keyboard but be cautious about using them when you don't know what equipment is being used at the other end. Computer operators should also remember some of the signs on their keyboard are only useful for ASCII and do not operate on Baudot RTTY.

An example of the miscellaneous signs problem is as follows. I often work a friend who uses a Telereader computer and if I am using my Siemens mechanical system in order for him to receive a dollar sign on his screen I must send a % sign from my keyboard and in order to print a dollar sign on my paper he needs to send a @ sign from his keyboard. Of course while we are understanding each other perfectly others printing us may well be getting something different again and wondering what is going on. When you don't know what the other fellow is using, better to spell out dollars etc to avoid confusion.

In order to understand the reasons for some RTTY operating procedures I will outline some contrasting details of mechanical and computer systems. In a mechanical system the printing is on paper (often called "hard copy") and with the computer it is shown on a screen (often called "glass copy"). In reception the mechanical system must have proper carriage return (CR) and line feed (LF) signals sent to it in order to prevent overprinting. Overprinting meaning the same paper is printed on more than once and in so doing all the information thus combined is made unreadable. However signals received on a computer system will not overprint as when a display line is completed the computer automatically goes to the next line not needing any CR or LF signals to do so. Two computer operators could happily work each other all day without sending a single CR or LF signal but any mechanical system operator trying to copy them would curse them for doing so. Mechanical systems wil be around for many years to come and computer operators should be considerate of those using such systems.

Most computer systems automatically send a CR and LF signal at intervals to suit mechanical copying systems and this interval called "line length" is normally adjustable by the computer operator. Most mechanical systems have a line length of about seventy columns that is the total of printed characters and the word spaces between them total seventy across the width of the page. As line lengths differ with different makes of machines it is best to stick to a short line length and sixty three has been found a good number of columns to use. With mechanical systems the operators should likewise remember that the line length of their machine may be greater than some other machines and not extend their lines right to the right hand side of the paper, once again sixty three is a good number of columns and this does not waste much paper. With computer systems there is often a switch where the operator in reception can switch off CR LF as this often wastes space on the screen and is unnecessary with the computer starting new lines automatically.

The following is a guide for normal practice in RTTY operating.

Baudot speed should be set at 45.45.

Shift should be set at 170 Hz.

Using FSK on HF bands, shift polarity should be such that the highest RF frequency is Mark and the lowest is Space. When using a SSB transceiver with audio generated FSK this would mean using LSB on all HF bands.

Using AFSK on VHF/UHF bands the tone frequencies should be Mark 2125 and Space 2295 Hz.

Your licence allows you to use either Baudot or ASCII codes but as normal mechanical systems can't print ASCII, computer operators are advised to normally stick to Baudot.

Normal operating procedures such as for phone or CW are also used on RTTY. You call CQ etc and use callsigns in exactly the same way except for a few additional points I now mention. As RTTY requires more exact tuning than CW or SSB it is normal practice to give a few seconds of tuning up signal at the beginning of each transmission. This is usually a string of RY letters repeated for as long as necessary. RY contains all the possible combinations of Mark and Space for each of the five Baudot code positions thus being a good test signal to tune up on.

Another thing needed for mechanical RTTY is to start each transmission with a CR LF and letters (LTRS) signal. This makes sure the receiving machine starts at the left of the page printing on a new line and printing letters. The receiving machine may for example have been printing figures and have stopped in the middle of a line. If you now send a full line without CR LF and LTRS this machine would print a string of figures and miscellaneous signs for the remaining half line and then overprint on the last printing position until you send a CR LF and even then if you don't send LTRS it will remain printing FIGS until you do send a LTRS signal. In other words all your efforts are wasted because you failed to send CR LF and LTRS at the beginning. It is also good practice to use CR LF and LTRS at the end of any long transmission thus leaving the receiving machine ready for the next call or message. Additionally many operators

adopt the practice of sending a LTRS signal at the beginning of each new "hard copy" line in case the receiving machine has, due to some false fade out or QRM signal, accidently gone into FIGS during the last line. In all this we are assuming the message is in letters as if it were in figures the reverse procedure would be used.

The following are some practical examples of calls. *CR LF LTRS RYRYRYRYRYRY-RYRYRYRY CQ CQ CQ CQ CQ CQ DE VK5XYZ VK5XYZ VK5XYZ AR K.* Of course CR LF and LTRS only stand for pressing the right key of that name in each case but the remainder is typed out exactly as it would be sent. *CR LF LTRS RYRYRYRYRYRYRYRY-RYRY VK2ABC VK2ABC VK2ABC DE VK5XYZ VK5XYZ VK5XYZ AR K (or if you prefer KN instead of K).*

Some would argue that CR LF and LTRS should also be sent at the end of each transmission and this is good practice with long transmissions but in the above case as calls will probably be repeated several times before a contact is made it is in my opinion hardly necessary to repeat CR LF and LTRS at the end of each short transmission as the beginning of the next one will do that anyhow. If you are breaking into an existing QSO do this at the end of a transmission, just send your callsign two or three times no RY CR LF or LTRS at this time and make it very brief in case you are doubling. Additionally it is very important to net exactly with the last transmission that you are following so you will be printed with no retuning. In the above examples the number of RY signals have been reduced somewhat, of course the number used depends on the band conditions etc and if conditions are poor more would be sent than if conditions are good. Also once contact has been made it may be unnecessary to send RY signals at all. Normal amateur abreviations are also used in RTTY, however only use the well known ones unless you know the person receiving them will understand.

In the above you will note no mention of CW or phone identification signals. It used to be mandatory to use this additional identification but it is no longer obligitory to do so. However, I consider it is a good idea to use CW or phone IDs if there seems to be some deliberate amateur QRM on your signals. As it is only necessary to put in your callsign once in every ten minutes, using callsigns at the beginning and end of every short transmission is a waste of time and quite unnecessary. In such cases it is possible to omit callsigns completely for ten minutes once communication has been established but I usually prefer to use them either at the beginning or the end of all my short transmissions.

When working with a group it is not necessary to send all the callsigns of every station in the group each time you make a transmission. One practice is to only use the call of the next station in line to transmit de your own callsign at the beginning and end of your transmission. I prefer to use the callsign of the station preceding me at the beginning of my transmission and the callsign of the station to follow me at the end of my transmission. It seems to me you should acknowledge the fact that you have heard the station preceding you hand it over to you as you are in effect answering his calling you in. Of course there are as many procedures as there are operators but I trust this short explanation of RTTY procedures will start any new operator on the right track.

WIA 1983 FEDERAL CONVENTION

I had hoped that the Convention held over the ANZAC weekend would officially recommend RTTY frequencies in HF bands but this was not to be. This matter was discussed and this discussion will continue until and during the next Federal Convention to be held in 1984. Certain guidelines have been laid down for consideration and these matters will be bought up at the 1984 Convention. I suggest that all RTTY Clubs and concerned RTTY operators should make sure their thoughts on these matters reach the Federal Technical Advisory Committee (FTAC) in plenty of time to be considered before the next Convention. Write to FTAC, PO Box 300, Caulfield South, Victoria 3162

I note in the June AR VK4 Notes that their Radio Club Workshop 1983 have proposed certain RTTY Calling Frequencies in the HF bands. These are generally good recommendations, however I do question the term "Calling Frequencies" referring to a band of frequencies. To me a calling frequency is normally a single frequency where you establish communication and then move elsewhere to continue the contact. However, as the recommendation is generally quite good I believe it would be a good idea for all other states to accept it at least until the WIA proclaim some RTTY frequencies.

NEW RTTY CLUBS

I would like to welcome two new RTTY Clubs formed or being formed, one in Tasmania and one in the Northern Territory. To contact the VK7 Group listen for VKs-7MM Martin, 7WZ Geoff, 7WJ Jack, 7AX Tony, 7DP Don, 7AH Tony and 7WP Ross.

To contact the NT Group listen for VKs-8ZMW Bill, 8HA Henry, 8CAW Karl, 8KRW Bob, 8DI Barry and 8FT Frank. By the time this list is published no doubt there will be other calls to add to this list. All the very best to these clubs and I trust members will find their Club both helpful and enjoyable.

BUILDING A KIT

As I am often getting enquiries concerning where to get RTTY Kits for building modulators and demodulators etc I intend from time to time to supply information re such kits. The kits described this month come from The Australian National Amateur Radio Teleprinter Society (ANARTS) and the description is from their Newsletter AREWISE. Space does not permit giving details of all their kits so only a few will be mentioned this time.

ETI-730 DEMODULATOR — This unit is a reasonable performance demodulator of audio frequency shift keyed signals. The demodulator drives a 40-60 milliamp loop. The demodulator uses a hard limiter stage, low 'Q' active filter discriminator which is adjustable, two stage low pass filter, automatic threshold correction stage, normal reverse switching, AC comparator, logic driver and keyer driver. The project is a very basic demodulator. The constructor should also look at the series of ETI articles which, when matched together, form a complete system. Input — high impedance, 1-10 volts. Baud rate 45 to 75 baud. Frequency shift 2000-3000 Hz, adjustable. Outputs — logic, printer and loop activity (LED ID) drivers. Components — IC's 6, TR. 2, Resistors 34, Caps 17. Auto start ETI May-80. Input stage and Uart ETI March-80.

ETI-731 MODULATOR — This unit is a phase coherent tone generator, sine wave AFSK, mark and space tone signal generator. Mark and space tones are adjustable. The circuit is used with the ETI-731 Demodulator. The tone generator has three adjustable level outputs. The circuit is of the Twin 'T' Oscillator design. Input — TTL, mark strappable high or low. Output 0-5 volts. Frequency Adjustment two Pots mark and space. Components IC's 2, TR.5, Diodes 1, Resistors 28 and Caps. 9.

I don't have space to describe it now but another very popular demodulator kit the DT 600 is also available, it is more expensive than the ETI-730 but in my opinion well worth the extra money. For these kits write to ANARTS, PO Box 860, Crows Nest, NSW 2065.

I would also like to hear from any others that supply kits. Please send me details in the form of a brief description that will be suitable for publication.

RD CONTEST

I have received some support in my efforts to stir up RTTY operators' interest in the 1983 RD Contest, and I have now received a letter from the chairman of FTAC re RTTY calling frequencies to be used in this contest. These frequencies are those mentioned in the VK4 notes on page 58 of the June issue of AR.

The letter refers to these as provisional RTTY calling frequencies (I assume a final decision will be made at the next WIA Federal Convention). Where these frequencies fall in a phone band it is advised that most likely the top third or thereabouts of the exclusive narrow band segment would be the safest area in which to operate.

73 from Bruce VK5XI.

AR

RADIO AMATEUR OLD TIMERS CLUB

Members of the RAOTC are remnded that the 7 MHz QSO Party will be held in conjunction with the New Zealand Old Timers Club on Monday the 8th August 1983 from 0800 to 1100 UTC.

Rules for this party can be found in Amateur Radio, February issue (page 20).

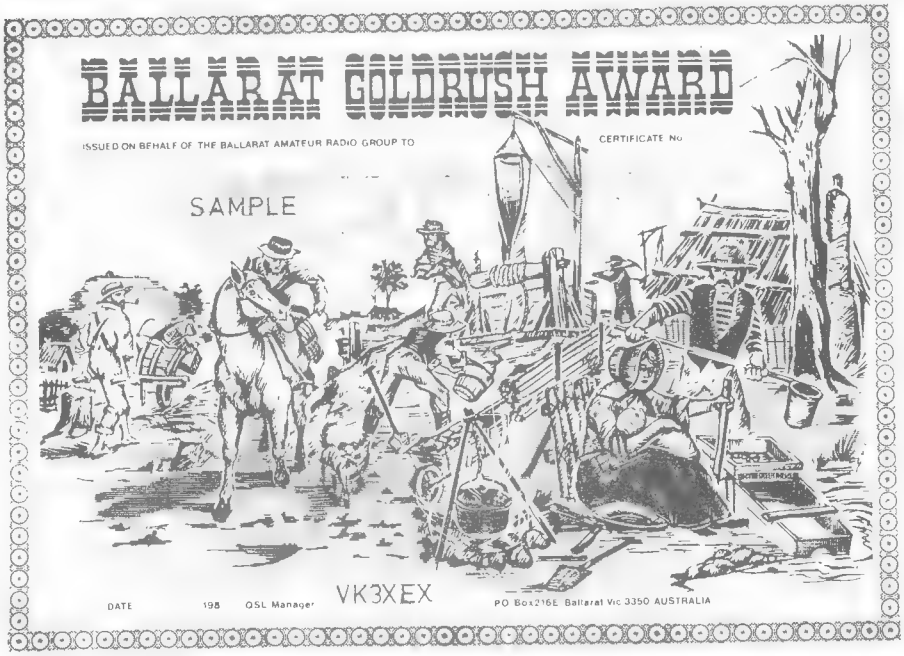
AR

AWARDS

Mike Bazely, VK6HD
FEDERAL AWARDS MANAGER
8 James Road, Kalamunda, WA 6076

Reading through amateur journals, DX newsheets and listening to on air chatter, many operators are expressing the opinion that Spratly Island should be deleted from the DXCC countries list. My initial comment is, why Spratly Island? Don't get me wrong, I am with the rest of the amateur population who mourn the loss of life during the recent DXpedition to Spratly, but to me the question still remains. It seems ludicrous that we can talk about the deletion of Spratly Island and at the same time talk about the inclusion of Peter the First Island. (If you are not sure of the location it is approximately 68° S and 90° W). I would suggest the dangers in reaching this location would be great and if it becomes a new DXCC country it will not be long before someone tries to put it on the air.

There are two possible viewpoints. Firstly, do we recognise that in man there is a natural desire to attempt the seemingly impossible? (No-one said we should stop trying to climb Everest or conquer Space). Alternatively we can take the second course and only recognise, as DXCC countries, those areas that are regularly inhabited. If we are going to change the rules, let's try and anticipate trouble and be wise before the event instead of after. For myself I do not wish someone to put his life at risk so I may advance my DXCC total by one.



Contact ten Ballarat stations for this award: Cost $2.00

DXCC Countries

Another XZ5A type operation is in the offing. It has been reported that a group of JAs are trying to get permission to operate in a part of Kampuchea that is held by the Khmer People's National Liberation Front. It is not known what callsign would be issued and if this operation would count as XU. The problem is that most countries, ours included, do not recognise the present Vietnam controlled government of Kampuchea.

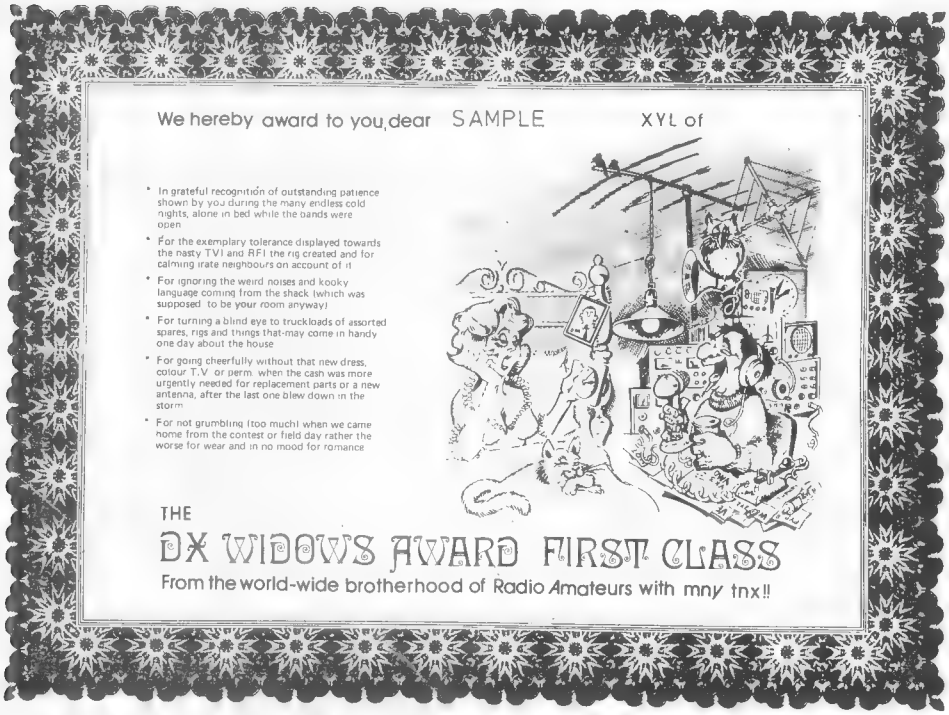
Further, it is not certain whether they recognise the KPNLF, so once again we have a DXCC problem. Will it count or not? In line with the amended rules (*see July AR*) it looks as if this one could also suffer the same fate as XZ5A.

Whilst on the subject of DXCC, there is some doubt, whether DJ5RT/TT8 had a legitimate licence particularly as an HB9 operator was issued with the call TT8AD. At the present time I have been accepting this operation *with the priviso*, if it subsequently turns out to be an unlicenced operation, credits already given will be deleted. My advice is to work TT8AD while you can. (He is very QRV at weekends on 21 MHz CW).

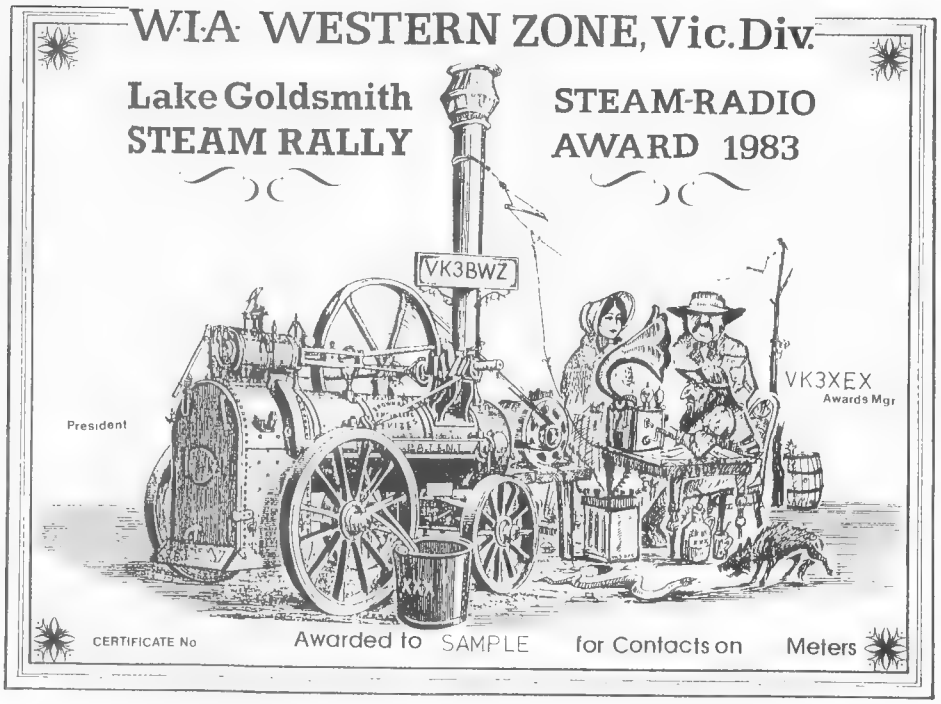
Contact ten Western District stations (Ballarat, Horsham, Warrnambool, Port Fairy, Stawell, Ararat and Districts) $2.00.

BARG AND WZVD AWARDS

Maurie, VK3XEX, has supplied an update on awards that are available from the Ballarat Amateur Radio Group and the Western Zone Victorian Division.


We hereby award to you, dear SAMPLE XYL of
In grateful recognition of outstanding patience shown by you during the many endless cold nights, alone in bed while the bands were open
For the exemplary tolerance displayed towards the nasty TVI and RFI the rig created and for calming irate neighbours on account of it
For ignoring the weird noises and kooky language coming from the shack (which was supposed to be your room anyway)
For turning a blind eye to truckloads of assorted spares, rigs and things that may come in handy one day about the house
For going cheerfully without that new dress, colour T.V. or perm when the cash was more urgently needed for replacement parts or a new antenna, after the last one blew down in the storm
For not grumbling (too much) when we came home from the contest or field day rather the worse for wear and in no mood for romance
THE
DX WIDOWS AWARD FIRST CLASS
From the world-wide brotherhood of Radio Amateurs with mny tnx!!

Send YL or XYL's name and your callsign with $2.00.



Refer April AR, p 54 for details of this award.

The current awards are:
Gold Rush Award
DX Widows Award
Western Districts Award
Lake Goldsmith Rally Award

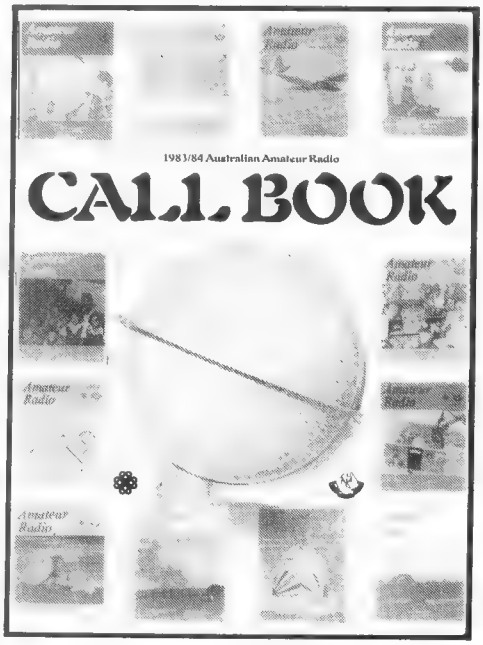
The Begonia Award is now no longer available. All the above awards may be obtained from VK3XEX, Maurie Batt, RSD, Rokewood Junction, Victoria 3351.

INFORMATION REQUIRED

If your award has not been listed during the past two years and you would like to have some publicity, drop a line to me with all the details

Many Thanks
73 es DX, Mike VK6HD.

AR



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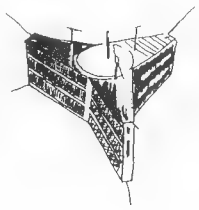

AMSAT AUSTRALIA

Colin Hurst VK5HI
8 Arndell Road, Salisbury Park, SA 5109

NATIONAL CO-ORDINATOR

Graham Ratcliff VK5AGR

INFORMATION NETS

AMSAT AUSTRALIA

Control: VK5AGR
Amateur Check-in: 0945 UTC Sunday
Bulletin Commences: 1000 UTC
Winter: 3.680 MHz Summer: 7.064 MHz

AMSAT PACIFIC

Control: JA1ANG
1100 UTC Sunday
14.035 MHz

AMSAT SW PACIFIC

Control: W6CG
2200 UTC Saturday
28.880 MHz

Participating stations and listeners are able to obtain basic orbital data including Keplerian elements from the AMSAT Australia net. This information is also included in some WIA Divisional Broadcasts.

ACKNOWLEDGEMENTS

Contributions this month have been received from Bob VK3ZBB (ups and downs) and Gary VK5ZK (JAS-1). In recent weeks the University of Surrey team, responsible for the ongoing operations of OSCAR 9, have perfected a new bootstrap loader to ensure error free loading of data sourced from the ground station into the onboard spacecraft computers. Consequently the UOSAT control centre is now able to load a much larger weekly bulletin (14.5 kilobyte maximum) for the dissemination of amateur satellite news. These bulletins in recent months have become the major source of news for satellite users in Australia as the traditional HF links, that have in the past provided the information, have become very unreliable due to diminishing sun spot activity. The bulletin is generally available along with the telemetry and digitalker experiment on Friday, Saturday and Sunday. Transmission is on 145.825 using 1200 baud ASCII (1 start + 7 data + even parity + 3 stop bits) with 1200 Hz and 2400 Hz tones (Kansas City Standard). In view of their accuracy and conciseness I have included, direct from the latest bulletins, the most topical and pertinent items. Our thanks to the UOS-UOSAT team.

AMSAT OSCAR 10 LAUNCHED

The latest Amateur Radio Communications Spacecraft, OSCAR-10, was launched successfully on board an ESA Ariane Rocket at 11:59:03 UTC from Kourou, French Guiana on Thursday 16 June. The spacecraft has been placed in a geosynchronous transfer orbit prior to motor firing to take it to a highly elliptic 63 degree inclination orbit due to take place shortly. The spacecraft carries two transponders (435 MHz to 145 MHz and 1268 to 436 MHz) and four general and engineering beacons (GB:145.810; EB:145 987; GB:436.04; EB:436.02 MHz). The 145 MHz beacons will be operated intermittently whilst initial power budget tests are performed. The transponders will not be available for general use until the spacecraft has been fully commissioned in some four to six weeks time.

Congratulations to AMSAT and ESA on a perfect launch.

OPERATIONAL STATUS OF OSCAR 10

The 145.810 MHz general beacon on board OSCAR 10 was activated some 2.5 hours after launch and telemetry data has been received by many stations. Preliminary analysis has indicated the spacecraft spin axis to be aligned towards the sun and the corresponding low battery charge rate will mean that the beacons will only be activated for short periods until the spin axis has been re-aligned. The 145.810 MHz GB has been transmitting CW and PSK telemetry.

Information now to hand states that the firing of the kick motor originally scheduled for orbit #3 has now been postponed to orbit #50. This delay is to allow realignment of the spacecraft's attitude to ensure that the required orbital parameters are achieved.

OSCAR 10 GENERAL BEACON CW FORMAT

The following format is utilised for the CW telemetry of the general beacon.

*HI HI AMSAT OSCAR 10 AT **.**.** UTC orbit *** MA *** 256 TLM: UBAT **.* V TBAT **.* C IARRAY *.* A SA ** DG SPIN ** RPM satellite status:* (Herein is contained the bulletin concluding with) *AMSAT OSCAR 10 HI HI.*

The figures shown as ** are inserted by the onboard computer and are real time values at the time the bulletin is transmitted. UBAT is the primary battery. TBAT is its temperature. IARRAY is the solar panel current. SA is the sun angle referenced to the spin axis. SPIN is the spin rate about the Z axis. The MA value following the orbit number is the mean anomaly and is referenced to 256, eg a value of 128 indicates it is at apogee and a zero value is the perigee.

OSCAR 10 PRELIMINARY ORBITAL ELEMENTS

EPOCH TIME: 83,168.05000000
Fri June 17 01:12:00 1983 UTC
ELEMENT SET: 1
INCLINATION: 8.6080 deg
RA OF NODE: 249.1370 deg
ECCENTRICITY: 0.7290751
ARG OF PERIGEE: 178.3420 deg
MEAN ANOMALY: 86.8220 deg
MEAN MOTION: 2.29579060 rev/day
DECAY RATE: 0.0023431 rev/day^2
EPOCH REV: 1
SEMI MAJOR AXIS: 24277.706 km
ANOM PERIOD: 627.234905 min
APOGEE: 35599.832 km
PERIGEE: 199.290 km
BEACON: 145.8100 MHz

UOSAT OSCAR 9 OPERATIONAL STATUS: JUNE 17

The spacecraft remains stable in a flat (end over end) spin with a decreased +Y/-Y facet temperature gradient of around 55C. Further experiments with the boom and scientific magnetometer have confirmed that the boom has been straightened and the tip mass re-oriented successfully to within 15 degrees of the spacecraft Z-axis. The tip mass has been retracted to the top face of the spacecraft. The magnetometer data has remained stable and will facilitate navigation and future attitude manoeuvres. Assuming that no significant changes occur to the tip mass, no further boom experiments are scheduled.

OSCAR 8 STATUS (7 JUNE 83)

Following the OSCAR 8 battery charge problems that have occured in recent weeks the following message has been received from W9KDR: . . . *"Do not attempt communication through the OSCAR 8 transponders during this low voltage emergency. Presently OSCAR 8 is in Mode A and command stations have been instructed to return to Mode D, (recharge) when telemetry tests are complete. Telemetry received in Mode A indicates the battery voltage has dropped to a point that has caused the telemetry to "hangup". The present frame of 180, 252, 324, 496, 568, 696, even after several days of recharge, indicates that the battery is not charging. Observations so far indicate that OSCAR 8 is following a similar battery problem that OSCAR 7 suffered. It is quite possible that any future operation of OSCAR 8 will be during times that the spacecraft is in sunlight. Presently we are in a minimum sunlight period which complicates matters even more. REMEMBER — No operation until further notice. 73 Bernie W9KDR . . ."*

JAPANESE AMATEUR SATELLITE (JAS-1)

On a recent trip to Japan, Gary VK5ZK visited JARL Headquarters. Through his interpreter Gary expressed an interest in satellites, and was subsequently introduced to the presumed co-ordinator for the JAS-1

project. Unfortunately, Gary misplaced the persons name and callsign, however he did come away with two excellent publications in Japanese and a specification broadsheet in English.

The proposed specifications are:

1.1 Launch
Date: Early 1986
Vehicle: H-I Test Rocket
Agency: National Space Development Agency of Japan
Site: Tanegashima, Japan

1.2 Orbital Parameters
General designation: Medium altitude, circular orbit
Periods: 120 minutes
Altitude: 1500 km
Inclination: 50 degrees
Access distance: Average 6000 km

1.3 Tracking, Telemetry and Command
Tracking: JARL and world-wide amateur stations
Command: JARL and specific world-wide amateur stations

1.4 Satellite
Weight: 50 kg
Dimensions: 400 mm x 400 mm x 300 mm (Heights), hexahedron
Communication: J-mode

(1) Analog system:
Frequencies allocation
Up-link: 145.9~146 MHz
Down-link: 435.9~435.8 MHz
Output power: 2 W (PEP)

(2) Digital system.
Frequency: 435.7 MHz
Modulation: FSK, 1200 Baud
Memory: 1 M Byte
Output power: 1 W (carrier power)

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OSCAR 9 FORMULAE UPDATE

TELEMETRY SENSOR ALLOCATION: UPDATE: 26 Apr 1983

CHANNEL	PARAMETER	CAL EQUATION
00	Secondary S/C Computer (F100L)	1.2N MA (0.125A <I< 1A)
01	Solar Array Current +X	200 ÷ 1.12N MA
02	Battery Half Voltage	N/100*(1.01)
03	Radiation Detector A O/P	40N*(1.04) Counts/S
04	Radiation Detector B O/P	40N*(1.04) Counts/S
05	Magnetometer Expt HY-Coarse	Int(NYC/63.5+0.689)*8054-FY
06	Magnetometer Expt HX-Coarse	Int(NXC/63.5+0.689)*8103-FX
07	Magnetometer Expt HZ-Coarse	-Int(NZC/63.5+0.689)*8009+FZ
08	Battery Pack-A Temperature	(474-N)/5*(1.01) degrees C
09	Spacecraft Facet Temperature +X	(474-N)/5*(1.01)degrees C
10	Visual Display Expt CCD Current	1.2*(N-30) MA (0.15A <I< 1A)
11	Solar Array Current -Y	200 ÷ 1.12N MA
12	2.4 GHz Beacon Expt Power O/P	(N-145)*0.45 MW
13	Radiation Expt EHT volts	N volts
14	Radiation Detectors Expt Current	(N÷20)/8*(0.983) MA
15	Magnetometer Expt HY-Fine	FY=18.55*(NFY-495.7) see 05
16	Magnetometer Expt HX-Fine	FX-18.53*(NFX-496.45) see 06
17	Magnetometer Expt HZ-Fine	FZ=18.34*(NFZ-493.55) see 07
18	Battery Pack-B Temperature	(474-N)/5*(1.01) degrees C
19	Spacecraft Facet Temperature -X	(474-N)/5*(1.01) degrees C
20	Spacecraft Computer Current	1.2*(N-25) MA (0.125A <I< 1A)
21	Solar Array Current -X	200 ÷ 1.12N MA
22	Battery/BCR +14V BUS	N/50*(1 056)
23	Sun Sensor +Z Axis	N/200*(1.01)
24	10.4 GHz Beacon Expt Current	(N-40)/4*0.97
25	Magnetometer Expt Temperature	(467-N)/6.85 degrees C
26	Magnetometer Expt Current	(N/8)*0.9945
27	Telecommand Receiver Current	(N-16)/8*(0.952) MA
28	Radiation Expt Temperature +X1	(474-N)/5*(1.01) degrees C
29	Spacecraft Facet Temperature -Y	(474-N)/5*(1.01) degrees C
30	Battery Charge Current	2.9N MA
31	Solar Array Current +Y	200 ÷ 1.12N MA
32	Power Conditioning Module +10V	N/60*(0.93)
33	Telemetry System Current	(N-16)/30*(1.084) MA
34	2.4 GHz Beacon Expt Current	0.4*(N-11)*(1.072) MA
35	145 MHz Data Beacon Power O/P	(N-82)*1.67
36	145 MHz Data Beacon Current	(N-7)/4*1.014
37	145 MHz Data Beacon Temperature	(474-N)/5*(1.01) degrees C
38	PRI S/C Computer Temperature -X1	(474-N)/5*(1.01) degrees C
39	Spacecraft Facet Temperature +Y	(474-N)/5*(1.01) degrees C
40	+14V Line Current	2 86N MA
41	+5V Line Current	1.28(N-50) MA (0.075A <I< 1A)
42	Power Conditioning Module + 5V	2N/300*(1.12)
43	Sun Sensor -Z Axis	N/200*(1.01)
44	HF Beacons Expt Current	(N-36)/3*1.038 MA
45	435 MHz Data Beacon Power O/P	(N-102)*1.792
46	435 MHz Data Beacon Current	(N-34)/3*1.053 MA
47	435 MHz Beacon Temperature	(474-N)/5*(1.01) degrees C
48	Sec S/C Computer Temperature -Y1	(474-N)/5*(1.01) degrees C
49	Spacecraft Facet Temperature +Z	(474-N)/5*(1.01) degrees C
50	+10V Line Current	3N MA
51	-10V Line Current	1.3*(N-60) MA
52	Power Conditioning Module -10V	0.0158N-0.0224'N'('N'=CH 32)
53	Navigation Magnetometer Y-Axis	(N-663.44)*183.486 (NT)
54	Navigation Magnetometer Z-Axis	-(N-336.55)*189.54 (NT)
55	Navigation Magnetometer X-Axis	-(N-496.5)*194.55 (NT)
56	Speech Synthesiser Current	(N-16)/10*1.009 MA
57	CCD Imager Temperature	(474-N)/5*(1.01) degrees C
58	Telemetry System Temperature +Y1	(474-N)/5*(1.01) degrees C
59	Spacecraft Facet Temperature -Z	(474-N)/5*(1.01) degrees C

The navigation magnetometer is subject to temperature drift which can cause clipping of the output.

NOTE: The axis labelling now employed is right-handed for all sub-systems.

UPS AND DOWNS

A regular listing in overseas magazines is the compilation of all satellite launches and re-entries. Bob VK3ZBB has now offered to prepare similar information for inclusion in this column on a regular basis. Thanks Bob for your offer and I look forward to the next listing.

The listing of "Ups and Downs" for March/April 1983 is as follows:

LAUNCHES

NUMBER	NAME	NATION	DATE OF LAUNCH	PERIOD MIN	APOGEE KM	PERIGEE KM	INCLN DEG	FACILITIES
1983-020A	ASTRON	USSR	23 Mar	98 hr	200 000	2000	5.5	SI
1983-021A	COSMOS 1447	USSR	24 Mar					
1983-022A	NOAA8	USA	28 Mar	101.2	829	806	98.8	W SAR
1983-023A	COSMOS 1448	USSR	30 Mar	104.9	1017	977	83	SI TM
1983-024A	COSMOS 1449	USSR	31 Mar	90.3	402	207	72.9	SI TM
1983-025A	MOLNIYA 1	USSR	2 Apr	700	39 023	483	62.9	TV CS
1983-026A	STS 6	USA	4 Apr	90.3	291	284	28.5	M
1983-026B	TDRS-A	USA	5 Apr	1086.1	35 388	21 857	2.4	To be GS at 54 4° W SL
1983-027A	COSMOS 1450	USSR	6 Apr	94.7	515	474	65.9	SI TM
1983-028A	RADUGA	USSR	8 Apr	1440	25 870		1.3	TV CS
1983-029A	COSMOS 1451	USSR	8 Apr					
1983-030A	SATCOM 6	USA	11 Apr	634.2	35 974	172	24.1	To be GS at 128° W CS
1983-031A	COSMOS 1452	USSR	12 Apr	100.3	826	786	74	SI TM
1983-032A	XXX		15 Apr					
1983-033A	ROHINI 3?	India?	17 Apr					
1983-034A	COSMOS 1453	USSR	20 Apr	94.5	520	473	74	SI TM
1983-035A	SOYUZ T8	USSR	19 Apr	89 5	278	226	51 6	M

KEY: GS — Geosynchronous
M — Manned
TM — Telemetry
TV — Television
SI — Scientific Instruments
CS — Communication Systems
SAR — Search and Rescue Facility
SL — Satellite Communication Link
W — Weather Observations

THE FOLLOWING SATELLITES HAVE DECAYED

1983-012A	COSMOS 1442	11 Apr
1983-018A	COSMOS 1446	30 Mar
1983-024A	COSMOS 1449	15 Apr
1983-26A	STS 6	9 Apr
1983-029A	COSMOS 1451	22 Apr
1983-035A	SOYUZ T8	22 Apr

Together with 44 other objects.

AR

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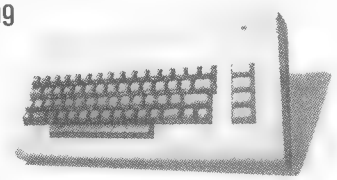

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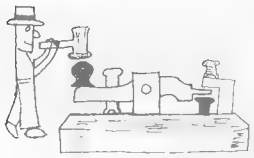


POUNDING BRASS

Marshall Emm·VK5FN
GPO Box 389, Adelaide, SA 5001

Last month's column on zero-beating has generated some interest, so we'll go a step further now by describing a couple of situations where the technique comes in handy.

Let's say, for example, that ZZ1FB has just reappeared on the HF bands for the first time since 1897. ZZ1 is a tiny island in the Pacific which is never heard from because it's under water at high tide, but the amateur who just bought it won't know that for a few hours yet. Anyway, he's up, you just *have* to work him, and you are in a dogpile with 10 000 Js and twice as many Ws.

Now you might think at first that it would be a good idea to zero-beat ZZ1FBs signal — but that's what a lot of people are trying to do and it's pretty darned crowded. After a while you will realise that you can't hear the guys the ZZ1 is working at all and it suddenly dawns on you that he's done what any phone operator would do — he's tuning across the edges of the dogpile perhaps 10 kHz away where he has a chance of copying somebody.

What you need to do is determine whom he is working and where. There is no easy way to do that but it can be done with patience and a bit of concentration. Say it's JA1ABC about 8 kHz up. Having found out who and where, all you have to do is zero-beat the JA1 and 'tail-end' him. You wait until they've just finished and hit the key, zero-beat on the same frequency, and if you have done it properly the ZZ1 will think the JA has decided to send something else, and all of a sudden he's listening to you.

Of course it is a lot easier if you have two (or more) VFOs, and even then it might take two or three attempts before you are rewarded with a ZZ1 in the logbook.

The other area where the zero-beat technique is handy is during a contest. Usually there is so much QRM around that a station calling CQ has everything on his receiver wound down as tight as possible, and if you go back to him a few hundred hertz off his frequency he simply won't hear you. Zero-beat him and you've got a good chance of making that point or multiplier, or maybe just the satisfaction of having used some expertise!

Another technique which is overdue to be mentioned is break-in operation. Strictly speaking, break-in means the ability to receive between the dots and dashes as you are sending. More often this is referred to as 'full-break-in', while receiving momentarily between words or phrases is known as 'semi break-in'.

There is a tendency for state-of-the-art bells and whistles rigs (your FT-Ones and TS-930s, etc) to offer full break-in, but it is very tricky to get used to it. The first time you use it you are bound to end up in a muddle, because the background noise on receive is turned on and off in time with your sending, so the effect is 'negative Morse' — very distracting. I suppose the answer would have to be to turn down the AF gain till you can just hear the station you are working if he should try to 'break you'. If you have too much trouble, and turn the AF gain all the way down, you might as well not have break-in, because you aren't receiving anything in between.

Semi break-in is available on most modern transceivers by way of the VOX circuitry. To use it you set the rig for VOX operation and each time you key the rig the VOX relay trips and holds the rig in transmit mode until a set period (VOX Delay) after you release the key. You should be able to set the delay period so that the relay drops out between words or sentences, but you will have to adjust it when you change speeds. At very slow speeds you could probably set the delay to zero and thereby simulate full break-in, with the relay tripping between the dots and dashes, but this is not recommended — it's not too good for the relay.

The Q-Code QSK is used in conjunction with break-in operation, but modern usage is a bit different from the original, which came about in the good old days of separate receiving and transmitting equipment and antennas, and/or split-frequency working. Nowadays, if a station asks you "QSK?" he wants to know if you can break back and forth with him rather than using callsigns at the beginning and end of every transmission. Usually he will send something like "QSK OK? BK" and you just respond with an R if you want to operate that way. Each station ends a transmission with BK (break, sometimes sent as $\overline{BK}$ but usually as separate letters) and callsigns are only used every once in a while (at least once every ten minutes to comply with regulations). It considerably speeds things up and you should certainly try it.

That's pretty well filled the column for this month. Next month we'll talk about tuning out the garbage. Till then 73.

AR

ALARA

Australian Ladies Amateur Radio Association

Margaret Loft, VK3DML
28 Lawrence Street, Castlemaine, Vic 3450

Well by the time you read this our Annual meeting will be over; thank you to all who accepted nomination for the next year. A full list will appear next month.

Sincere thanks to the executive committee over the past year for their time and efforts from all members of ALARA. In particular Geraldine, Jessie, Valda and Marlene.

NEW MEMBER

Welcome to new member Christine VK7CC who joined on 10th June 1983. We hope you enjoy being a member of ALARA. Former calls Christine has held are GI8IBH and GI8CXI.

ALARA membership now stands at ninety VK-YLs, sixty seven DX-YLs and two subscribers. Valda would be pleased to hear from any prospective members. Details may be obtained from Valda at PO Box 4, Brighton, 3186. Membership is $5.00 per year.

PHOTOS WANTED

We are trying to compile a two page album for inclusion in AR later in the year. We have some but do need more. Put your name on the back so we can return them to you.

TWELFTH JLRS PARTY CONTEST

Phone section Saturday 24th September at 0300 UTC to end Sunday 25th at 0300 UTC.

CW section Saturday 1st October at 0300 UTC to end Sunday 2nd at 0300 UTC.

All licensed men and women are invited to participate. OMs exchange RS or RST and QSO number starting at 001, YLs exchange RS or RST and QSO number starting at 2001 and JLRS members RS or RST and QSO number starting at 5001. Separate consecutive QSO numbers must be used in PHONE and CW contest.

Entry in each contest is limited to ONE of the following classes — A: more than four bands. B: less than three bands.

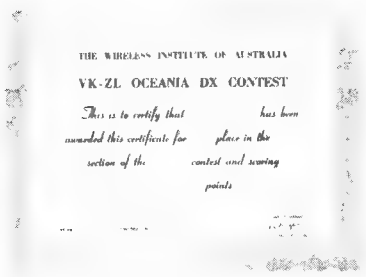
Scoring:

- Phone and CW will be scored as separate contests. Separate log for each contest.
- Each contact with the same station on different bands will be counted.
- OMs score one point for each contact with YL, five points for JLRS member. YLs score one point for OMs and five points for each YL contacted.
- Multiply the number of contact points by the total number of prefixes worked in each band.

Copies of all Phone and CW logs must show claimed score, band, mode, RST, callsign worked and power transmitted and be SIGNED by the operator and postmarked not later than 20.10.83. Typed or printed logs please to JA1YL; Kuni Kan 4-5-38-406 Hyakunincho, Shinjuku-ku, Tokyo 160 Japan.

Certificates will be sent to all participants who submit a log.

Until next month 33/73/88 from Margaret VK3DML. **AR**


THE WIRELESS INSTITUTE OF AUSTRALIA
VK-ZL OCEANIA DX CONTEST
This is to certify that has been awarded this certificate for place in the section of the contest and scoring points

VK/ZL/OCEANIA Contest 1983

Greg Williams, VK3BGW
VK/ZL/O CONTEST MANAGER
1 Noorabil Court, Greensborough, Vic 3088

The WIA and NZART, the National Amateur Radio Associations in Australia and New Zealand, invite world-wide participation in this year's VK/ZL DX Contest.

Phone section to be held for twenty four hours from 1000 UTC, Saturday, 1st October to 1000 UTC, Sunday, 2nd October.

CW section will be held for twenty four hours from 1000 UTC, Saturday, 8th October to 1000 UTC, Sunday, 9th October.

RULES

There shall be five main sections in this contest:
(a) Transmitting Phone.
(b) Transmitting CW.
(c) Receiving — Phone and CW combined.

For VK/ZL only
(d) Transmitting Phone — eight hour section.
(e) Transmitting CW — eight hour section.

All amateur bands may be used but no crossband operation is permitted.

VK/ZL stations, irrespective of the location, DO NOT contact each other for contest purpose EXCEPT on 80 and 160 metres.

Only one contact on CW and one contact on Phone per band is permitted with any one station for scoring purposes.

Only one amateur is to operate any one station under the owner's callsign. Should two or more operate any particular station, each will be considered a competitor and must submit a separate log under his own callsign. This is not applicable to overseas competitors operating club stations.

Cyphers. Before points can be claimed for a contact, serial numbers must be exchanged and *acknowledged*. The serial number of five or six figures will be made up of the RS (Phone) or RST (CW) report, plus three figures which begin with 001 and increase in value by one for each successive contact.

Scoring:
(a) For the world: 2 points for each contact on each band with VK/ZL stations. *Single band* score will be QSO points for that band multiplied by total VK/ZL call areas worked on that band. *All Band* score will be total QSO points for all bands multiplied by total VK/ZL call areas worked on all bands.
(b) For VK/ZL stations: points for each QSO on different bands as follows: 160 m, 20 points; 80 m, 10 points; 40 m, 5 points, 20 m, 1 point; 15 m, 2 points; 10 m, 3 points.

Score for EACH BAND will be the total points score for that band multiplied by the TOTAL PREFIXES worked on that band. Final "All Band" score is the sum of the contact points from each band, multiplied by the sum of the multipliers on each band.

Note W1, K1, WA1, WN1, A1, N1, are all separate prefixes and count as multipliers. W6AA/1 would count as "W1" not as "W6".

80 metre section: for contacts on this band between VK and ZL, each VK and ZL call area is considered a "scoring area", with each contact counting 10 points. Each different call area will count as a multiplier.

160 metres section: as for 80 metres except each contact counts as 20 points.

Logs: Overseas Stations
(a) Logs to show date, time in UTC, callsign of station contacted, band, serial number sent, serial number received. Underline each new VK/ZL call area contacted. Separate logs must be submitted for each band.
(b) Summary sheet to show callsign, name and address, equipment used, and for each band, QSO points for that band, VK/ZL call areas worked on that band.

VK/ZL Stations
(a) Logs to show date, time in UTC, callsign of station worked, band, serial number sent, serial number received.
(b) Summary sheet to show callsign, name and address for each band, QSO points for that band, prefixes worked on that band, claimed score for that band. All band score computed from sum of points from each band, multiplied by the sum of the multipliers on each band.

A separate log for each band is required starting with 001 for each band.

Failure to remove duplicate contacts will incur heavy penalties and greater than two per cent duplicates will disqualify the entry.

Awards: Separate awards for Phone and CW.
A — World:
(a) Certificates to the top scorers in each country (call areas in W, J, U).
(b) Depending on reasonable degree of activity, separate awards may be made for top scorers on different bands.

B — VK/ZL:
(a) Top scorers in each call area of VK/ZL
(b) Top scorers on individual bands.

Eight hour section:
(a) and (b) as above.

Entries to:
WIA VK/ZL Contest Manager VK3BGW
1 Noorabil Court
Greensborough
Victoria 3088
Australia.

For VK/ZL, entries to arrive before 31 December, 1983, and from overseas by 31 January 1984.

SWL SECTION

The rules are similar to the transmitting section but it is open to all members of any SWL Society in the world. No transmitting station is permitted to enter this section.

The contest times and logging of stations on each band per weekend are as for the transmitting section except that the same station may be logged twice on any band — once on phone and once on CW.

To count for points, the station heard must be in QSO exchanging cyphers in the VK/ZL DX contest and the following details noted -date, time in UTC, call of the station heard, call of the station he is working, RS(T) of the station heard, serial number sent by the station heard, band, points claimed.

Scoring is on the same basis as for the transmitting section and a summary sheet should be similarly set out.

Overseas stations may log only VK/ZL stations, but VK receiving stations may log overseas stations and ZL stations, while ZL receiving stations may log overseas stations and VK stations.

Certificates will be awarded as listed in the section under awards.

AR

QSP

RF RADIATION

The FCC is looking into the matter of exposure standards for human beings.

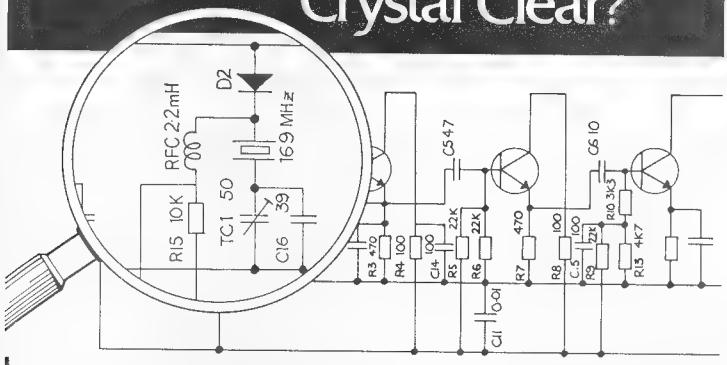
Focus on this problem stems from the fact that energy in electromagnetic waves can present a hazard to life. Eg: X-rays and gamma rays can produce ionisation and subsequent genetic damage while RF radiation of sufficiently high intensity can heat biological tissue. (Refer AR April, May and June.)

According to the Office of Science and Technology, FCC, studies have shown that the human body absorbs RF energy at a maximum rate in the 30 to 300 MHz region. Accordingly, the FCC has undertaken the task of developing RF safety standards which take account of frequency dependance.

Adapted from CQ magazine April 83

AR

Crystal Clear?



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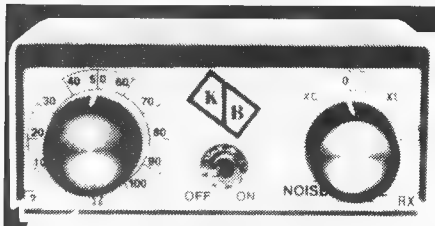

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CONTESTS

Reg Dwyer, VK1BR
FEDERAL CONTEST MANAGER
Box 236, Jamison, ACT 2614

CONTEST CALENDAR

AUGUST

6-7	European CW Test +++
13-14	Rememberance Day Contest Rules in June AR
13-14	DARC WAE CW Test +++
13-14	SEAnet Phone Test +++
17	QLF Activity
20-21	SARTG RTTY Test
20-21	Keymans Club of Japan
27-28	All Asian CW Test

SEPTEMBER

3-4	DARC Corona "CORONA" 10 m RTTY
10-11	G QRP Activity
10-11	DARC WAE Phone Test
17-18	VK Novice Test
17-18	Scandinavian CW +++
24-25	Scandinavian Phone +++

OCTOBER

1-2	VK/ZL Phone Contest
8-9	GARTG SSTV Test
15-16	VK/ZL CW Contest
29-30	CQ WW DX CW Test

NOVEMBER

12-13	DARC WAE RTTY Contest
26-27	CQ WW DX CW Test

All tests marked with +++ are not yet confirmed.

PLEASE NOTE

THE RD CONTEST

The practice of one operator operating two station/calls simultaneously is considered not to be within the spirit of the contest and any logs suspected of this will be disqualified without recourse.

VK NOVICE CONTEST

Don't forget the VK Novice Contest in September. Let's generate some interest for this contest which had such a poor showing last year. This contest is a marvellous opportunity for all to participate and gain awards The maximum speed for CW has been reduced to 10 WPM to encourage this mode.

CONTEST CHAMPION 1982/83 CONTEST

Winner is . . . VK5QX

The contests chosen for the VK Contest Champion were: John Moyle, VK/ZL, RD and the VK Novice Contests. The points awarded are as follows: 1st = 10 points, 2nd = 9 points, 3rd = 8 points, etc thru to 10th position for 1 point.

An entrant must be included in three of the four contests. He/she may not score but must have entered.

To win the entrant must be a member of the WIA. On the completion of all contests the highest points scorer wins the contest champion trophy for one year.

The contests for the 1982 year have been completed and the available results are listed below. The results of the VK/ZL contest are not usually available until the June edition of AR. Therefore the trophy is awarded in the latter part of the year and held for the following year.

The contest for the 1983 year began with the John Moyle National Field Day and will continue with the Remembrance Day Contest. To become eligible you must enter and to stand a chance of winning you should try for a high score (positions one to ten) in each of the contests.

Good luck.

The winner of the contest champion trophy for 1982 is VK5QX, for being the most consistent high scorer and participator in the VK contest scene.

CALLSIGN	JM	VK/ZL	RD	VK NOV	TOTAL
5QX	10	16	10	14	50
4XA	—	36	10	—	46
3WP	10	—	10	18	38
3AEW	—	8	—	10	10
3ADW	7	—	7	—	14
7RY	—	9	7	—	7
3BRM	—	9	9	—	9
1LF	—	—	3	4	7
6RZ	—	9	3	—	3

RESULTS FOR THE 1983 CONTEST SO FAR

CALLSIGN	JM	VK/ZL	RD	VK NOV	TOTAL
3XQ	10				10
2KFJ	9				9
6NSD	10				10
3CGH	9				9
5QX	8				8
3KI	7				7
4NDW	6				6
3DAW	5				5
3VF	4				4
2JM	10				10
3BKU	9				9
3BAF	10				10
2EL	10				10
3SP	9				9
5YO	8				8
2TR	10				10
4AOF	9				9
5DL	8				8
3LC	10				10
3XB	9				9
2BQS	8				8
1DL	7				7
7AL	6				6
3DAK	5				5
7NIM	4				4
3KCC	3				3

AR

INTRUDER WATCH

Bill Martin, VK2EBM
FEDERAL INTRUDER WATCH
CO-ORDINATOR
33 Somerville Road, Hornsby Heights, NSW, 2077

Readers of this column will have seen, over the last several issues, listed examples of intruder stations using AM, RTTY, and CW modes of emission. There are, of course, other modes being employed by intruders, which are forbidden to the amateur operator, and are therefore very difficult, if not impossible to resolve and identify. The best thing we can do is to keep an eye on them, and see if they appear to be coming up on a regular basis, and start reporting them if this seems to be the case.

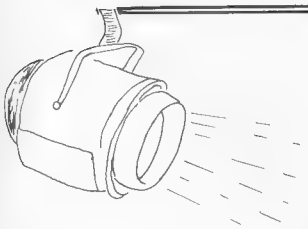
Probably one of the most important aspects regarding the presence of an intruder station on the amateur bands is the need to *NOT QSY* when he appears.

Obviously this is going to present the amateur operator with some problems, as some of the intruder signals, as we know, are quite strong. However, I find it a measure of satisfaction *NOT* to *QSY* if an intruder comes on top of my QSO. This is precisely what the intruder station wants — you to move aside for him. If you don't mind being bullied, then by all means shift frequency, or abandon the QSO altogether. But this certainly won't encourage the intruder to use this own frequencies, and move away from *YOUR* bands.

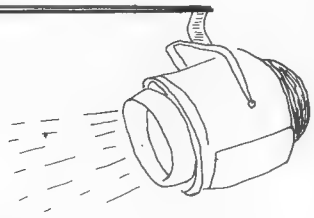
If you are QRM'd by an intruder, stay with it, and let him suffer the QRM from your *LEGITIMATE SIGNAL*. I rather suspect that, even although the amateur's power output is usually rather lower than that of the intruder, the intruder will become aware that someone else is on the frequency, and, with any luck, it will cause the intruder some hardship.

No doubt we are all aware of the problems caused by a CW signal coming up on top of us when we are conducting a CW QSO. Hopefully, the same problems will be encountered by the intruder, when we stay on our legal frequency. But the difference of course, is that the amateur operator *IS THE ONE ENTITLED TO BE THERE*

Past experiences have shown that intruders will QSY if there is enough interference from an amateur station, particularly when both modes employed are that of RTTY. However, don't wast your time trying to out-talk Radio Beijing or Radio Tirana on 40 metres. Most importantly, don't cause any QRM to an unidentified station, unless you are one hundred per cent sure that the offending station is in fact an intruder. We have enough problems with intruders without the need for amateurs to QRM each other! The intruder problem is a continuing one, and needs continuing efforts by us all to try and resolve it. Please support the Intruder Watch, if only occasionally. AR



SPOTLIGHT ON SWLing



Robin Harwood, VK7RH
5 Helen Street, Launceston, Tas 7250

Well, the annual Remembrance Day Contest has rolled around once more. This contest is held in memory of those Australian amateurs who made the Supreme Sacrifice with their lives for our Nation during the Second World War. It usually is staged as closely to VJ Day — the date on which hostilities ceased, and this year will be over the weekend of the 13th and 14th of August from 0800 UTC until 0759.

For further details regarding the rules of the RD, refer to the June issue of this magazine on page 42. Don't forget that there is a receiving section of this contest, open to all SWLs. However, I expect that some of you will be tied up assisting with local amateurs in their logkeeping chores. Anyhow, all the best to you in the "RD — the friendly contest".

RADIO NETHERLANDS

It now seems unlikely that Radio Netherlands will conduct any further experiments over shortwave in the exchange of computer data transfer. Recent evaluation of their Phase Three broadcast on 4th November, based upon 550 recorded reports from listeners, has proved to be disappointing. Only 178 were of sufficient quality to provide a perfect or near perfect readout at the rate of 300 baud. The faster 1200 baud rate failed to come out on shortwave, and is therefore too unreliable.

As well, all of the successful printouts came from within Europe. Evidently multi-hop propogation does not give a sufficiently constant signal level or strength to remain within the tolerance levels of the home computer. Yet another problem was that the transfer from the Hilversum studios to the two relay bases in Bonaire and Madagascar via Intelsat communications satellite was also unsatisfactory and unreliable. This prevented any coherent data being provided by listeners to these relayed transmissions. Because of phase distortion on the satellite circuit, as well as the digital to analogue converters, employed on voice and music programmes, failed to re-convert the computer audio to its proper shape. Because of these difficulties and the unreliability of satellite circuits at the present time, it is clear that there is no future to using the relay bases without the use of special modems.

Therefore, these results have indicated to Radio Netherlands that there is no point persisting with these experimental transmissions on shortwave of data transfer, until technology improves.

SUCCESSFUL COMPUTER DATA TRANSFER

However, as computer data transfers seems to be successful on MW and FM, particularly in Holland, Radio Netherlands will be including data transfer on taped transcriptions of their Media Network programmes. These are made available to local radio stations on MW and FM throughout the World. There has been a successful weeky programme over one of the Dutch domestic networks devoted to computers, which includes data transfers without any reception problems, even at 1200 baud. However, because of the problems experienced with different brand computers with programming language, a sort of computer esperanto had to be developed to facilitate the exchange of data between brands such as Commodore and TRS 80. Known as BASICODE, this system has been in use successfully in data transfer between different computer models for over a year now. Recent improvements to the system have been developed and a handbook in English or Dutch has been written explaining it, together with an accompanying cassette. These should be available shortly from Radio Netherlands. For further details regarding price and postage information, please write to the following address:

Media Network Computer Experiments,
English Section,
Radio Netherlands,
PO Box 222 1200 JG,
Hilversum, The Netherlands.

SATELLITE SWLING

Satellites have been in the news lately, with the successful launch of AMSAT-OSCAR 10 in mid-June, as well as the projected amateur activity from the next space shuttle flight in November. It is interesting to note that Radio Netherlands has released a twelve page booklet explaining satellites for the shortwave listener. This follows up on a recent segment on Media Network devoted to this subject. Written by John Branegan, this booklet tells how to monitor some of the satellites with just an ordinary shortwave receiver and a simple antenna, explaining how experiments can be done in propogation and importantly how to keep track of the satellite. This booklet is free and is available from the above address.

WATCH FOR THESE

There are two very interesting programmes coming up this month on shortwave radio. On the 14th at 1430 UTC, you can hear an account of an event that happened over 100 years ago. Krakatoa was a mountainous outcrop between Java and Sumatra, which suddenly exploded, killing thousands of people. The noise of its eruption was clearly heard many thousands of kilometres away in Adelaide, while the cloud of debris in the sky provided spectacular sunsets for many months afterwards. Tune to the BBC World Service on Sunday the 14th August at 1430 UTC, or on Friday the 19th at 2330 UTC for an account "Krakatoa — the Island that Exploded".

On Wednesday the 17th August, Radio Netherlands is broadcasting a special report entitled "A Bridge Too Far". This is an account of the mighty air-borne army assault for a narrow corridor of land near the Dutch town of Arnhem launched in 1944. Reporter Bob Chaundy will be with a reunion tour by some participants in this battle, which was code-named Operation Market Garden. Was this operation a daring success or a failure? Judge for yourselves at either 0748 or 0848 UTC on 9.770 or 9.715 MHz. Note that 9.715 will only carry the 0848 release.

Well, that is all for this month. Until September, the best of listening and 73 — Robin VK7RH.

AR

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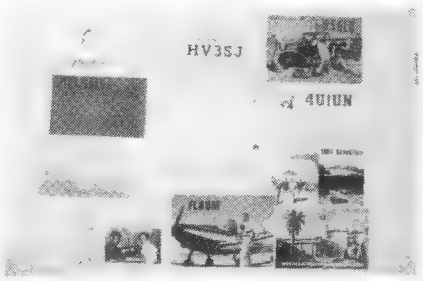

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CONTACT US FOR QUOTES

MURPHY STRIKES WITH VENGEANCE

Our old friend, Mr Murphy really let his hair down in Novice Notes, page 30, last month. The reactance table referred to was omitted and the drawings of Figures 6 and 7 were transposed although the text was correct.

Line Length (degrees)	0	5	10	15	30	60	90	120	150	180	210
Resistance (ohm)	100	97.8	91.7	83.3	57.1	30.8	25.0	30.8	57.1	100	57.1
Reactance j x (ohm)	0.0	-12.7	-23.5	-31.2	-37.1	-20.0	0.0	20.0	37.1	0.0	-37.1

TABLE 1 — REACTANCE VS LINE LENGTH
The values in the table are the values that would be measured by an RF bridge connected to a 50 ohm transmission line connected to a 100 ohm load. If the load were an antenna then these are the resistances and reactances that an ATU would need to cope with.

No matter what kind of ATU you use you will, from time to time, find an antenna that won't tune satisfactorily on one band. Back in the old days (before 1965) when AM rigs with PI couplers were common, the problem of not being able to load up on one band frequently occurred. It was solved, in most cases, by increasing the length of the transmission line. The same solution will be found to be just as successful with the ATU problem. We all know that a quarter wavelength line can be used to transform a small resistance to a large one. We also know that a half wavelength will not change the impedance if connected between a load and a transceiver. See Figs 6, 7. But what happens for other cable lengths? By using a calculator programme supplied by Evan, VK3ANI, I have been able to calculate the changes of impedance for a 50 ohm line

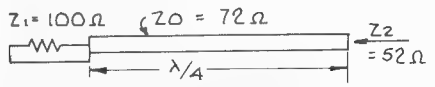


Figure 6 — Quarter Wavelength Line.
A quarter wavelength of 72 ohm cable transforms a 100 ohm resistance to a 52 ohm resistance. Resistances greater than 100 ohms are transformed to values less than 52 ohms.

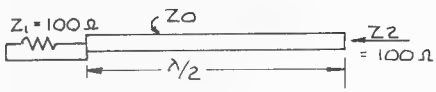
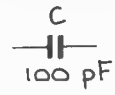
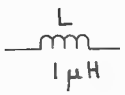


Figure 7 — Half Wavelength Line.
A half wavelength of transmission line of any impedance transfers the same value of impedance at the input to the output.

with a 2:1 VSWR. The results are shown in Table 1. I have assumed a 100 ohm load. The line length is given in electrical degrees. 360 degrees equals one wavelength, 180 degrees equals half a wavelength, ninety degrees equals a quarter wavelength etc. The results are given for five degree increments up to thirty degrees and then in thirty degree increments. Negative values of reactance are capacitive reactance and positive values are inductive. The table is done this way to make it independent of frequency.

The mathematically inclined should study Fig 8 as the values in Table 1 are for series





At 21 MHz
Xc = 1/2 π fC
= 75.8 ohm

We can say C has a reactance of — 75.8 ohms.
Xl = 2 π fL
= 131.9 ohms

We can say L has a reactance of 131.9 ohms.

Often the symbol j is used to signify reactive impedance. Thus the circuit shown below can be described at 21 MHz as 100 — j 75.8 ohms.

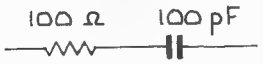


Figure 8 — Reactance Notation.

components. That is for a 100 ohm load or termination connected to a thirty degree long line the impedance seen at the other end of the line is a resistor of 57.1 ohms in series with a capacitor of 37.1 ohms reactance.

Inspection of Table 1 should reveal a periodic (repetitive) variation of impedance values as the line length is increased. In this example the resistance varies between 100 and twenty five ohms every ninety degrees. The reactance varies from zero through a maximum capacitive reactance of about forty ohms and back to zero for the first ninety degrees. As the line length is increased further the reactive portion again increases to about forty ohms and back to zero but this time it is inductive. The cycle is repeated every 180 degrees.

This is a result we might have anticipated as we know that adding a half-wavelength line does not change impedances. This also allows us to remove all the exact half-wavelengths (on paper or in our imagination of course) to see what fraction remains. The transformation caused by that fraction is the transformation of the whole line.

For example a line 390 degrees long is equivalent to one only thirty degrees long as far as impedance transformation is concerned. The more knowledgable reader will be saying that line loss has an effect too. So it does but on HF the effect is reasonably small and will not affect our general conclusions and comments.

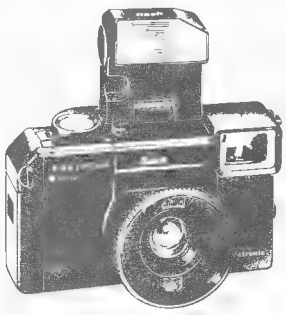
So where have we got to? Well if our ATU has problems in tuning a particular load because the load is too high or too low we can now see a solution. That is by adding up to a quarter-wavelength of feeder a more manageable load will be presented to the ATU. In some cases up to a half-wavelength may be required.

One further point to note is that if the VSWR on the line is greater than 2:1 then the range of impedances will be greater than shown in Table 1.

At a later date I will discuss VSWR in more detail and bury a few sacred cows in the process.

73 DE VK3AFW

JULY'S BEST PHOTOGRAPHS



The judges selected the underside view of the TR7950, page 21, Trap Vertical on the roof of the GPO, page 15 and Ken VK3KC operating SSTV, page 9.
These photographs will now be considered for the AGFA CAMERA prize at the end of the competition in June 1984.

TECHNICAL CORRESPONDENCE

REGULATED 13.8 V POWER SUPPLY

In the May issue of AR you published an article of mine concering the construction of a Regulated 13.8 V Power Supply (page 14).

The article has created quite a deal of interest and I have received many requests for information. One of the requests has been for the supplier of the voltage regulator used — it appears to be difficult to obtain in states other than Victoria.

Would you please place an entry in the next issue (if possible) advising that Voltage Regulator UA78HG is obtainable from Stewart Electronic Components, 44 Stafford Street, Huntingdale, Vic 3166 at $7.92 each, plus tax.

Yours faithfully
Desmond Greenham, VK3CO
23 Stewart Street,
Seymour, Vic 3660

AR

EMF FOR ICOM IC-22S

I refer to the article "Simple External Frequency Selection for the ICOM IC-22S" in AR, April 1983 (page 22).

The usefulness of this accessory is very greatly increased if used in conjunction with a table relating frequency to switch positions. In the DRAGNET article such a table was referred to. It was compiled by Trevor Mayhew, VK2YEP and published in an earlier edition of DRAGNET. This part was edited out of the AR article.

Anyone familiar with binary numbers can easily produce such a table. A modified version of Trevor's table is shown in Fig 1.

Inspection of the table shows that it should be possible to operate the IC-22S beyond 147.975 MHz and I have verified that this is so, using a dummy load, of course. Therefore care is needed when using the device and also when setting up the internal diode matrix.

A minor typographical error has been carried across from the DRAGNET article — the last word in the third last paragraph should be "correct" rather than "covered".

I was interested to find an allusion to the prior existence of the technique in the article by Ian Jackson, VK3BUF in AR, March 1983 (page 15). I will be following up Ian's suggestion regarding replacement of R141 in the near future. (See note*.)

Yours faithfully
Reg Fookes, VK2AKY
19 Delagoa Place,
Caringbah, NSW 2229

** Readers attention is drawn to the correction printed in AR July, (page 39), re R141.*

AR

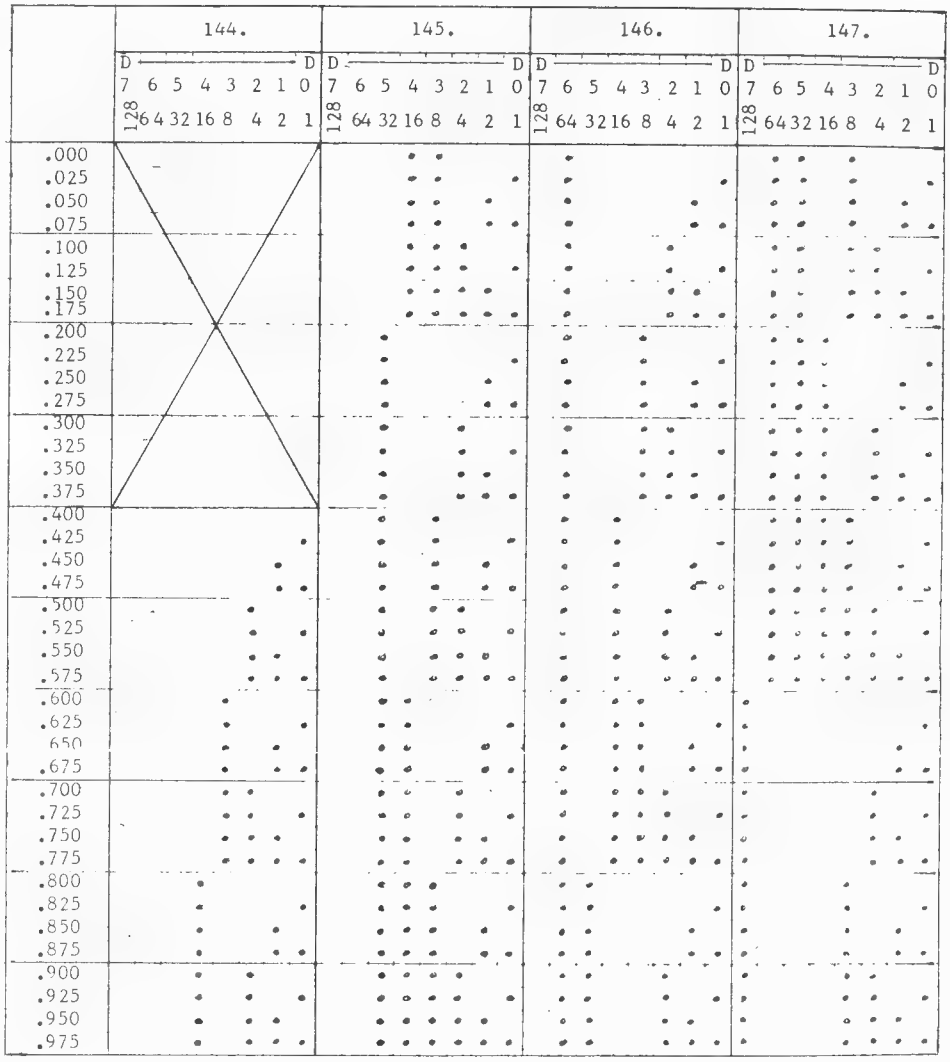


Fig 1 — IC-22S Frequency Code *A dot signifies that the Switch is closed.*

WCY 83

ARRL PRESIDENT VISITS THE WHITE HOUSE

ARRL President Clark W4KFC, who serves on the Council for World Communications Year 83, attended ceremonies at the White House when President Reagan officially announced US participation in WCY83.

Also in attendance were other members of the WCY Council including the Under Secretary of State, William Schneider, K2TT.

A reception to celebrate WCY83 was also hosted by William K2TT at the Department of State.

America is really taking WCY to the top. Let us in VK be positive with our hobby and let the outside world know that amateur radio does exist.

Adapted from CQ magazine April 83.

AR

VK2 MINI BULLETIN

Jeff Pages, VK2BYY
VK2 MINI BULLETIN EDITOR
Box 1066, Parramatta, NSW 2150

COUNCIL REPORT

Divisional Council met on the 17th June at Amateur Radio House. The Glen Innes and District Amateur Radio Club and the Far South Coast Amateur Radio Club were affiliated with the NSW Division, bringing the total number of affiliated clubs to thirty three. Matters arising from the recent Conference of Clubs were further discussed. Council decided to invest $5000 in Premier State Bonds, taking advantage of the high rate of interest offered. Fourteen new members were accepted to the division.

REMEMBRANCE DAY CONTEST

All members are reminded that the Remembrance Day Contest is coming up on the 13th and 14th August (*see June AR for the rules*). This year VK2 has a weighting factor of 9.58, the highest of all divisions, so with a bit of effort we stand a good chance of taking out the trophy. As usual, the contest will be opened by a special broadcast from VK2WI on all the normal frequencies at 0730 UTC on the 13th, and there will be no morning broadcast on the 14th. As the contest result depends heavily on percentage participation, don't forget to send in your log!

NOVICE COURSE

The Coff's Harbour and District Amateur Radio Club is conducting another Novice Radio Class at the Orana High School. The theory instructor is Rick Fletcher VK2BKV, with Harry Alderson VK2EP in charge of CW. The course began on the 13th July, but if you are interested then contact Brian Lackie VK2DLM at 60 Yellow Rock Road, Urunga.

HERE AND THERE

In the June Mini Bulletin Jim Button's callsign was incorrectly givin as VK2NPO, and should be VK2NPA. Apologies Jim. The next Conference of Clubs will be hosted by the Central Coast Amateur Radio Club on the 6th November, and agenda items for discussion must be received at the Divisional Office by the 16th September. Broadcast Officer Peter Jeremy VK2PJ is looking for additional volunteers to join the broadcast roster as announcers and engineers for either morning or evening broadcasts. If you would like to join the broadcast team either advise on the callbacks or contact the Divisional Office. Please feel free to call in at Dural any Sunday to see what goes on in putting the broadcast to air.

NSW members and clubs are invited to submit news items for inclusion in these notes to the WIA NSW Division, PO Box 1066, Parramatta, NSW, 2150. Items for October AR must reach the office by the 22nd August.

AFFILIATED CLUBS

GLEN INNES AND DISTRICT AMATEUR RADIO CLUB

PO Box 26, Glen Innes, NSW, 2370.
Meetings: Last Tuesday of month at 7.30 pm at the Glen Innes High School. AGM in July.
Nets: Each Sunday at 8 pm on 3.580 MHz.
Committee: Ivan Botha VK2BIO President, Russell Scott VK2ERS Secretary, Lyn Cameron VK2BSF Treasurer, Richard Cambridge VK2BYV, Graeme Willey VK2EBU, Anthony Berger VK2BGQ.
Classes: Each Wednesday from 11.30 to 12.45 at the High School, as part of the "interest elective" programme.
Club Station: VK2DOQ.

FAR SOUTH COAST AMATEUR RADIO CLUB

PO Box 339, Merimbula, NSW, 2548.
Committee: Jim O'Brien VK2BHU President, Owen Roberts VK2PCJ Vice President, Ron Ride VK2BQF Secretary, Terry Howard VK2XBK Treasurer.
Repeater: VK2RFS channel 6750.
Contact: Ron Ride VK2BQF on (0649) 51698.

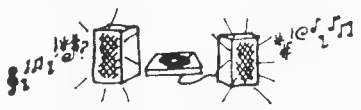
BLUE MOUNTAINS AMATEUR RADIO CLUB

PO Box 54, Springwood, NSW, 2777.
Meetings: First Friday each Month at Springwood High School, Grose Rd, Springwood.
Nets: Tuesday 8.30 pm on 3.540 MHz and 9 pm on rep 7050.
Committee: Brad VK2KTT President, Terry VK2BRQ Vice President, Les VK2WU Secretary, Len VK2BLZ Treasurer, Eric VK2BXB, Dennis VK2EMF, Noel VK2ZNS, Jim VK2PBU/XAG, Eion VK2ZRI, Dave VK2XDS and Brian VK2BX.
Repeaters: VK2RBM channel 7050, VK2RUT channel 8375.
Club callsigns: VK2AUX, VK2NCM.

73 from Jeff VK2BYY **AR**

EMC

(Electro Magnetic Compatibility)



If radio frequency interference is causing you a problem you are reminded that — "Advice on all types and aspects of interference (PLI, TVI, AFI, etc.) is available from the National EMC Advisory Service".

FORWARD DETAILS TO VK3QQ, Federal EMC Co-ordinator, QTHR.

WA BULLETIN

Jim Rumble VK6RU
VK6 QSL MANAGER
Box F319, GPO, Perth, WA 6001

The QSL Bureau is for members of the WIA. The address for all correspondence to the VK6 Bureau is Box F319, GPO, Perth, WA 6001.

QSL BUREAU

INWARDS

Cards from overseas and other states of Australia arrive at regular intervals and are sorted into files which are available at each WIA meeting. Those members who cannot attend meetings are invited to forward some stamped self-addressed envelopes to the above address when incoming cards will be despatched. Please number the back of your envelopes to indicate when the last has been used.

OUTWARDS

Each outgoing card must have a QSL Sticker affixed to its back and it is desirable to place the callsign of the recipient also on the back of the card to facilitate sorting. QSL Stickers are available from the above address for $2.00 per sheet of 100. Cards are posted regularly in bulk by surface mail to the QSL Bureau of the addressee's country or to his QSL Manager whichever is indicated.

QSL BUREAU
VK6RU P.O. Box F319
Perth, West Australia

Please pre-sort your cards into their respective countries by prefix — it speeds up transit of your cards outwards.

As cards for VK6 stations go immediately into the local files there is no need to affix a sticker to them.

If you change your address then please advise the Bureau so that the ammendment may be made to your remaining envelopes.

CHARGES SINCE JAN 1946

1 January 1946	5/ per 100
1 March 1966	50¢ per 100
1 December 1974	80¢ per 100
1 September 1975	$1 per 100
1 September 1976	$2 per 100

AR

DEADLINE

All copy for October AR must REACH PO Box 300, Caulfield South, 3162 no later than 25th AUGUST.

VK3 WIA NOTES

Greater community awareness of amateur radio was essential, the President of the Victorian Division, Jim Linton VK3PC said recently.

Recent issues such as the question of radio masts, phone-patching and the Radio Communications Bill, which was to come before Parliament, all showed a lack of awareness by members of the general public as to the extent, value and nature of amateur radio, he added.

"It is absolutely vital that our hobby of amateur radio is recognised," he said.

"The recent bush fire emergency showed how little public awareness exists.

"The WIA, being the oldest radio society must get the recognition it deserves.

"CB received a lot of publicity during its boom period and unfortunately amateur radio became confused with it in the general public's mind."

Jim said that he had three primary aims to achieve dring his term in office.

They were:

- *To improve the awareness of amateur radio in the community.*
- *To improve communications between the Divisional Council and zones, clubs and members.*
- *To improve the image of the Divisional Council amongst members.*

While Victoria had the largest number of amateur members of any division, it was essential that the number of members be increased, Jim added.

"Many amateurs just do not realise the services that the Institute provides in representing their individual interests at an official level, such as the recent Victorian inquiry into high radio masts," Jim said.

"If you listen to any amateur repeater you'll hear people using them regularly who are not members of the WIA. They seem to be using them completely unaware of who provides the facility — sometimes I don't think they are.

"Yet these same people are the first to criticise, if for some reason a repeater is out of action. They just don't appreciate that $32 a year would go some of the way to helping to provide the facilities they are using."

Communications between the Victorian Division Council and zones, clubs and members was a two-way contact, Jim said.

"We have to let the members know what is happening and they have to let us know their views," he added.

"How often do you hear people moaning on air, but if you suggest that they come to a meeting and say the same thing they are often too busy.

"Sure, we on the council have to reflect the members views but it is difficult to do that unless amateurs join the Institute and take an active interest in its affairs.

"Quite frankly, in the past, the Victorian Divisional Council probably was not attracting the right number and calibre of people, but the new Council is a group of highly enthusiastic people dedicated to amateur radio.

"It is my aim to ensure that the image of the Victorian Divisional Council is held more highly."

Jim, a 36-year-old journalist, joined the WIA in 1962 as a Junior Associate (SWL).

In 1971 he was a member of the broadcast committee as an announcer on the weekly Sunday broadcasts, and at the same time was a committee member of the Eastern and Mountain District Radio Club.

In April 1981, Jim started the "Stop the Russian Woodpecker Campaign" and later the same year was made an ex-officio member of the Victorian Divisional Council to help with the issue of radio masts — an ongoing task.

In the same year he began campaigning for Telecom to lift its prohibition on phone-patch and following a meeting with Telecom, Jim conducted Australia's first authorised phone-patch experiment with DOC and Telecom approval.

Jim is continuing the campaign saying: *"Phone-patch will eventually be approved for radio amateurs in Australia — its only a matter of time".*

In 1982 he began assisting the WIA in Victoria with public relations and earlier this year joined the VK3 Divisional Council and was official observer at the WIA Federal Convention in April, assisting Federal Councillor, Alan Noble VK3BBM and Alternative Councillor Des Clarke VK3DES.

PRESIDENT

Jim Linton, VK3PC.
Age 36. Occupation — Journalist.
Portfolio — President.

VICE-PRESIDENT

Bill Wilson, VK3DXE.
Age 49. Occupation — Electronic Service Engineer.
Joined Council in 1983.
Portfolio — Vice President.

SECRETARY

Ian Palmer, VK3YIP.
Age 37. Occupation — Communications Engineer.
Joined Council in 1982.
Portfolio — Secretary.

TREASURER

Des Clarke, VK3DES.
Age 53. Occupation — Retired.
Joined Council in 1981.
Portfolio — Treasurer, Alternate Federal Council and Outwards QSL Manager.

MINUTE SECRETARY

Margaret Wilson.
Occupation — Typist/Clerk.
Portfolio — Minute Secretary.

CHAIRMAN

Alan Heath, VK3KZ.
Joined Council in 1978.
Portfolio — Chairman.

AR

DISPOSALS OFFICER

Fred McConnell, VK3BOU.
Age 47. Occupation — Installation Inspector, SECV.
Joined Council in 1980.
Portfolio — Disposals Officer.

VICE CHAIRMAN & COUNCIL NEWS CO-ORDINATOR

David Johnson, VK3YWZ.
Occupation — Civil Servant.
Joined Council in 1982.
Portfolio — Vice Chairman & Council News Co-ordinator.

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ULTRA COMPACT AND LIGHTWEIGHT
Measures only 5.6 (141) W x 1.6 (39.5) H x 7.3 (183) D, inch (mm) and weight only 2.8 lbs (1.25 kg), ideally sized for installation in today's compact automobiles.
* The depth of 7.3 inches (183mm) is the maximum effective length using flexible antenna cable and connector.

25 WATT OUTPUT, WITH HI/LO POWER SWITCH
The TM-201A produces a powerful 25W of RF output from a surprisingly compact design. (The TM-401 produces 12W of RF output at HI power position.)

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Features dual digital VFO's, with front panel VFO-A/B switch.

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Memory 1 is for the priority alert function. Memories 2 and 3 store a single frequency, and permit repeater operation using the OFFSET switch. Memories 4, 5 and the COM (common) channel store transmit and receive frequencies independently, allowing operation on repeaters having both standard and odd offset.

PRIORITY ALERT SCAN
With ALERT switch "ON", once every 6 seconds the unit scans back to memory channel 1 for approximately 0.3 seconds to monitor the activity on the priority channel (CH-1).

MEMORY SCAN AND PROGRAMMABLE BAND SCAN
MS switch initiates memory scan. Skip memories in which no data is stored. In both memory and band scans, scanning stops on busy channel and automatically resumes after 6 seconds.

HIGHLY VISIBLE YELLOW LED FREQUENCY DISPLAY
Four digit yellow LED display featuring improved visibility indicates receive and transmit frequencies. An S/RF LED bar meter with "BUSY" indicator, plus "MR" (Memory recall), "ALERT", and "ON AIR" LED indicators are provided.

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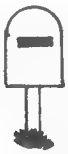

LETTERS TO THE EDITOR

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publisher.

CONGRATULATIONS

Bill Orr, W6SAI, and I enjoy reading AMATEUR RADIO each month and would like to congratulate you and your associates on the high-class job you do on this fine amateur radio journal. It sets a standard which is, I am sure, admired worldwide and achieves a fine balance between the technical and human interest stories.

And it is improving with every issue!

Best wishes to all our VK friends.

Sincerely,
Stuart D Cowan, W2LX, KM2XDU
Radio Publications, Inc.
Box 149,
Wilton, Conn, 06897, USA

AR

SPRATLY ISLAND

This letter was written to the DX Editor

The Spratly Island tragedy serves very well to illustrate how our hobby has failed to move with the times. What was originally a good idea has become a nightmare as old ideas are overtaken by current realities. In the process DXpeditions are becoming unacceptably dangerous and costly, legally questionable and the real purpose of the DXCC award is being lost.

In times past, when radio was a pup, the concept of DXCC was to work the world and the use of national prefixes was a convenient and valid basis for the award. The complexity and validity of this approach has now reached a point where the whole purpose of the major amateur awards needs to be reassessed in more rational terms.

To begin with, what the DXCC really measures is an ability to place a workable signal anywhere on the face of the globe. Secondly, it requires evidence of *LEGAL* Operation. Where the present system falls down is that it requires the controlling bodies, eg ARRL, to make political decisions. Something it is not supposed to do.

A more equitable system should surely be to divide the globe into areas based on the navigational grid, for example 20 x 20 degrees giving 324 areas. DXCC and WAZ are largely politically based whereas a grid system is not and hence would not involve a non-political body in making political judgements.

A grid system would have a number of advantages.

- *The worked all areas, WAA, could be made more prestigious by its very nature of working the globe.*
- *It would encourage portable/mobile operation and thus more technically difficult operations*
- *DXpeditions would be safer as dangerous places, both in a military sense and a physical sense, could be avoided.*
- *WAC and WAZ could be redefined in terms of assemblies of base grids and could thereby make Siberia and Antarctica "continents" as well as the traditional areas.*
- *WAC and WAZ could become steps towards the prime WAA award.*

There would still be, under this scheme, a place for the concept of countries by limiting these to those whose administrations are recognised de-facto or de-jure by the UN and who allow amateur operations. Two letters, one to the Secretary General and another to the administration concerned would be enough to establish this fact. Such an award could be "Worked All Nations".

WAPX would remain as at present and could become the award that people, who like to cover their walls with paper, make their objective. However, the amateur controlling bodies would have to be ruthless in allowing credit only for those prefixes which are not in political dispute. Such a policy would, for example, eliminate Burma at the present time.

I believe that a scheme along these lines is used in some places for VHF purposes, and as such is not a new concept. Considering the danger and dispute that characterises the DXCC at present perhaps the time has come to extend the principles to the HF spectrum as well. Whatever system is adopted it must satisfy the requirements.

- *of being capable of administration without entering into political judgement*
- *of minimising the danger to amateur operators who choose to visit remote regions*
- *of presenting a real technical challenge in working all areas on the face of the earth with the subsidiary benefit of encouraging portable, mobile and possibly QRP operation*

I would be very interested in seeing what ideas others may come up with to deal with this very important problem.

With best regards
John Andersen, VK5ZFO
230 Young Street,
North Unley, SA 5061

AR

DELETE THE SPRATLYS

In response to the devastating news regarding DJ3NG and DJ4EI, the Blue Mountains Amateur Radio Club urges Australia to take the lead in deleting the Spratly Islands from the DXCC lists.

Why wait for the DX Advisory Committee in Newington (Connecticut) to do it? Is their word gospel? By taking the lead in opposing Spratly's inclusion, we set an example to the world, and maybe encourage other nations to delete this "country" from their DXCC lists.

We join many amateurs around the world in condemning the perpetrators of this tragedy, but hasten to point out that it wouldn't have occurred if Spratly had not have been elevated to the status it now enjoys by a couple of people in Connecticut.

Whilst Spratly remains on the countries list, someone will try to activate it — witness Chito, DU1CK's expedition not one month after the DL group's tragedy. While the temptation is there, adventurous amateurs will place their lives in danger. This is unacceptable and thus, such temptation must be removed for our own sakes.

Yours faithfully
Blue Mountains Amateur Radio Club
Les Cullen VK2WU
Secretary
PO Box 54, Springwood, NSW 2777

AR

PROFIT MAKING ADVERTISING

I have read the letter by Norm Melford, VK3ZTN in AR June 1983 and I wish to add the following to what has already been said.

I too have seen advertisements for a wide variety of equipment such as high power 2 kW amps for 26-27 MHz, up to 240 W transceivers covering 26-27 MHz, cordless telephones, door openers, radio alarm systems, etc.

It would seem that no matter what the advice is and no matter how illegal it is, that all one has to do is import and sell a large number of such items and they will eventually be legalised by the DOC. The key wording here being "profitable marketing by the creation of a demand for such items" and not giving a damn what you sell and who you sell it to.

Today anyone who has the cash can purchase any type of transmitting equipment that is available on the market with no questions asked not like, just after WWII, when a variety of AM/CW transceivers (even kruddy ones) appeared on the disposals market, one had to sign a declaration that the transmitting section would be dismantled within a certain time before one could purchase such items.

Yours sincerely
Graham Muirhead, VK5ZCM
PO Box 38
Magill, SA 5072

AR

APPRECIATION

I would like to express my appreciation to Des Greenham VK3CO for his article on the 13.8 regulated power pack published in the May issue of the AR.

Whilst the concept was not new it did make me go looking for an old TV set so that I could wind a transformer and knock up a unit.

I found two old TV sets at Salvo's jumble sale for five dollars and apart from the transformers I now have a lot of bits.

The unit works very well but I expect that Des knows this without being told and it is in constant use with the 2 metre equipment.

Thank you VK3CO
Yours faithfully
Den Smith VK3DIS
4 Sunlight Crescent, East Brighton, 3187

AR

HELP NEEDED

I live too far away from the major centres so I'll have to ask for assistance from other amateurs who also have a problem when it comes to deciding among the ever-increasing variety of makes and models of second-hand radios and equipment that is offered for sale!

I would treasure a reference directory of amateur radio equipment, describing all the gear on sale since, say 1960, together with the year it first hit the market and the price it sold for. A brief description listing the salient points and the manufacturer would be all that would be necessary.

Such a directory would culminate with current manufacturers offerings and possibly could be incorporated with our call book and would undoubtedly make that reference book even *more* useful.

How do others feel about this? Surely I can't be the *only* one considerably confused when trying to sort out, say 2 metre rigs from the model numbers in the "Hamads"!

This would be of great benefit to our novices with the purchase of a first HF rig. (Some of the old valve sets are still excellent performers!)

73 John Brennan VK4SZ
PO Box 26, Innisfail 4860
Any volunteers? — Editor

AR

LICENCES

With reference to the letter in June 'AR' from VK7PW, Peter Wolf; on the matter of the examination for the Novice Licence being too easy. I feel as he has a background making the examination easy for him to pass he has not considered the situation of a lot of novice licence holders who have had to work very hard to achieve their licence, and for various reasons are not capable of doing better, and would

thereby be deprived of a very beneficial hobby that keeps them in touch with people. I hope to eventually pass the AOCP.

Yours faithfully
Bron Brown VK3NTD
99 Foam Street, Rosebud 3939

AR

SINCERE THANKS

A letter of sincere thanks to those amateurs (many unknown) who enabled an urgent message to reach me, at a time of communication disruption during recent VK4 floods.

Briefly the facts: Late April, XYL and I departed for VK4 land (with VHF mobile), objectives — Carnarvon Gorge and to meet VK4NIH Tim. By Injune the terrain was saturated, 50 km south of the Gorge car bogged, three hour extrication, return to Injune. Phoned Gorge for road info, they had message from Tim to phone my home QTH friend VK3DTH Rex — learned of death of my only brother, in Victoria, and made several necessary phone calls. Deteriorating roads and time obviated attending funeral.

Communication links for message to reach me — my son in Victoria received news of death — he only knew I hoped to meet a Q'land amateur called Tim, and he phoned Rex, who recalled a QSO with myself and a VK4 named Tim — combed log book and found VK4NIH. Rex went on 20-40-80 metre bands for 8 hours to trace any of my 2 metre contacts, or Tim. I had been heard at Parkes, Moree, St George, Roma, but no Tim! Rex then phoned WICEN, VK4KD Ken, gave his phone number, and VK4NIH Tim as possible link to me. Tim is a Govt drilling rig operator, port/mob Emerald area, no fixed QTH or phone, and flood bound! Ken alerted VK4 operators, including, among others, VK4KAL, VK4LE and VK4APJ Andy at Emerald, who luckily knew Tim personally, and that he occasionally spent weekends with friend Ray (no phone) at Springsure. Andy and XYL Chris (VK4VIT) made 160 km trip in 4WD vehicle to Springsure — and found Tim! — who contacted Ken WICEN, received message and phoned that to Carnarvon Gorge. Thus was the circuit closed, taking only 20 hours!!

Days later, XYL and I were 'flood bound' at Moura (phone and mail unpredictable) — met VK4NHX Mick — used his rig to contact Rex at home, who then phoned my family in Victoria advising both safe at Moura.

Heartfelt thanks to all concerned, especially Tim, and Chris, Ray and Carol, Mick and Barbara, Keith and Beryl, who made homes and rigs unreservedly available under those trying circumstances — such is the amateur radio fraternity

73 Reg VK2ELG and XYL Eff
63 BUffalo Crescent, Thurgoona via Albury 2640

AR

IONOSPHERIC PREDICTIONS

Once again I write to enquire about your "Ionospheric Predictions" (courtesy Dept of Science and Environment IPS Sydney) on the matter of "Legend" for this particular system. Are we the readers to understand that the three lines as shown for Western Australia in the legend appear as two lines in the actual prediction.

Also on the "Notes on Predictions" mention is made of symbols numbering one to six yet these likewise do not appear on the prediction chart

I would appreciate the courtesy of a reply to this second letter of mine if thought worthy of one this time. I look forward to your magazine with much enthusiasm each month

Yours faithfully
R A Davey, VK6NND
12 Lillian Street
Cottesloe, WA

EDITORS NOTE

The descrepancy of three lines in the legend and two lines in the charts is a drafting error which will be corrected.

The symbols referred to are Graflex symbols as noted in the text of "Notes on the Predictions". The Graflex Charts are reproduced in other publications. The charts in Amateur Radio Magazine are produced by Len VK3BYE using information supplied by the Department of Science and Environment IPS, Sydney.

Normally publication of a letter to the editor is regarded as acknowledgement. The policy regarding acknowledgement is stated on Page 1.

Editor

AR

COPYRIGHT!! WHY?

It was with quite some astonishment, dismay and alarm, followed by concern that I noted that the article 'To Heard and Back' by Dave Shaw, VK3DHF/VK0HI published in the May and June issues of 'Amateur Radio' were marked '1983 Copyright Amateur Radio'. The article clearly carried an amplification of this fact in the following words appended thereto: "This article may not be printed in part or whole without the prior written permission of the Editor of Amateur Radio".

My first thoughts were, surely someone has made a bad mistake. Further contemplation of the subject produced the conclusion that our hobby was now definitely being prostituted to commercialism. If this was not the case why should an article of general interest to DXing amateur radio operators all over the world carry such a marking?

I am well aware that the mountaineering component of the Heard Island expedition 1983 may have aims with regard to recouping costs and even possibly making a profit and of this I have no criticism, however let the experience gained by us as 'AMATEUR' radio operators provide a lesson.

It is an almost certain fact that without the support of amateur radio world wide the expedition would not have taken place Similarly, the amateur radio component would never have made it on its own as a viable operation. It can be noted that other expeditions have had to include a variety of interests to help cover costs.

The lesson referred to is that we must stand up for our rights when engaging in any joint ventures with people who may not properly understand the true meaning and spirit of amateur radio as a hobby.

However, back to the copyright matter.

By this action you have made it, whilst not impossible, at least difficult and inconvenient for our fellow amateurs all around the world to print for the interest of other amateurs extracts from this story of one of the most important DXpeditions in amateur radio history and one which could have certainly put Australia well and truly to the forefront of the international amateur DX scene. Those inconvenienced in this manner range from editors of minor club newsletters, sundry DX information sheets right through to the mighty ARRL 'QST' magazine.

Let's face it, many amateurs world wide contributed financially to the expedition and many would be most interested in written reports on same.

Thus, why did our magazine do something which to my mind runs completely contrary to the spirit of amateur radio and which in my memory has never before happened?

Please don't tell me the magazine was legally bound in this way because I believe that the contract signed by expedition members specifically allows for articles for amateur radio purposes without copyright, viz. Paragraph 13 of same

"The Expeditioneer shall not withstanding the provisions of Clauses 11 and 12 hereof be entitled to publish directly or indirectly accounts photographs and other information of the expedition in magazines and publications and to meetings for the benefit of radio amateurs and to this end no copyright shall be assigned to the Company but such members shall not otherwise publish any material for a period of five (5) years from the date hereof without the prior written consent of the Company."

So, could you please put my mind at rest and confirm for me that in this instance a mistake has been made in taking out any copyright on the article referred to. Further, should this really be the case could you please publish in the interests of amateur radio in general a complete waiver to the copyright claimed?

Yours sincerely
Ian J Hunt VK5QX
8 Dexter Drive, Salisbury East 5109

Amateur Radio Magazine normally extends reprinting rights to kindred societies and many other publishers subject only to Amateur Radio Magazine receiving credit as the source. Such rights are generally on a reciprocal basis.

From time to time Amateur Radio Magazine publishes material where some additional conditions apply. In such cases a note regarding copyright is published. One other article has already been printed with such a note this year.

Both requests to reprint 'To Heard and Back' have been acceded to

The Editor

AR

STOLEN EQUIPMENT REGISTER

The VK2 Divisional Office currently maintains a register of stolen radio equipment. With a comprehensive listing of such equipment, members about to purchase gear can contact the office during normal hours of business and check with the Register before completing the transaction.

Through this service, it is hoped to be able to track the interstate or intrastate movement of stolen radio equipment and hopefully find the people responsible for its theft and distribution.

If you know of equipment which has been stolen or lost or require further information contact the VK2 Divisional Office.

AR

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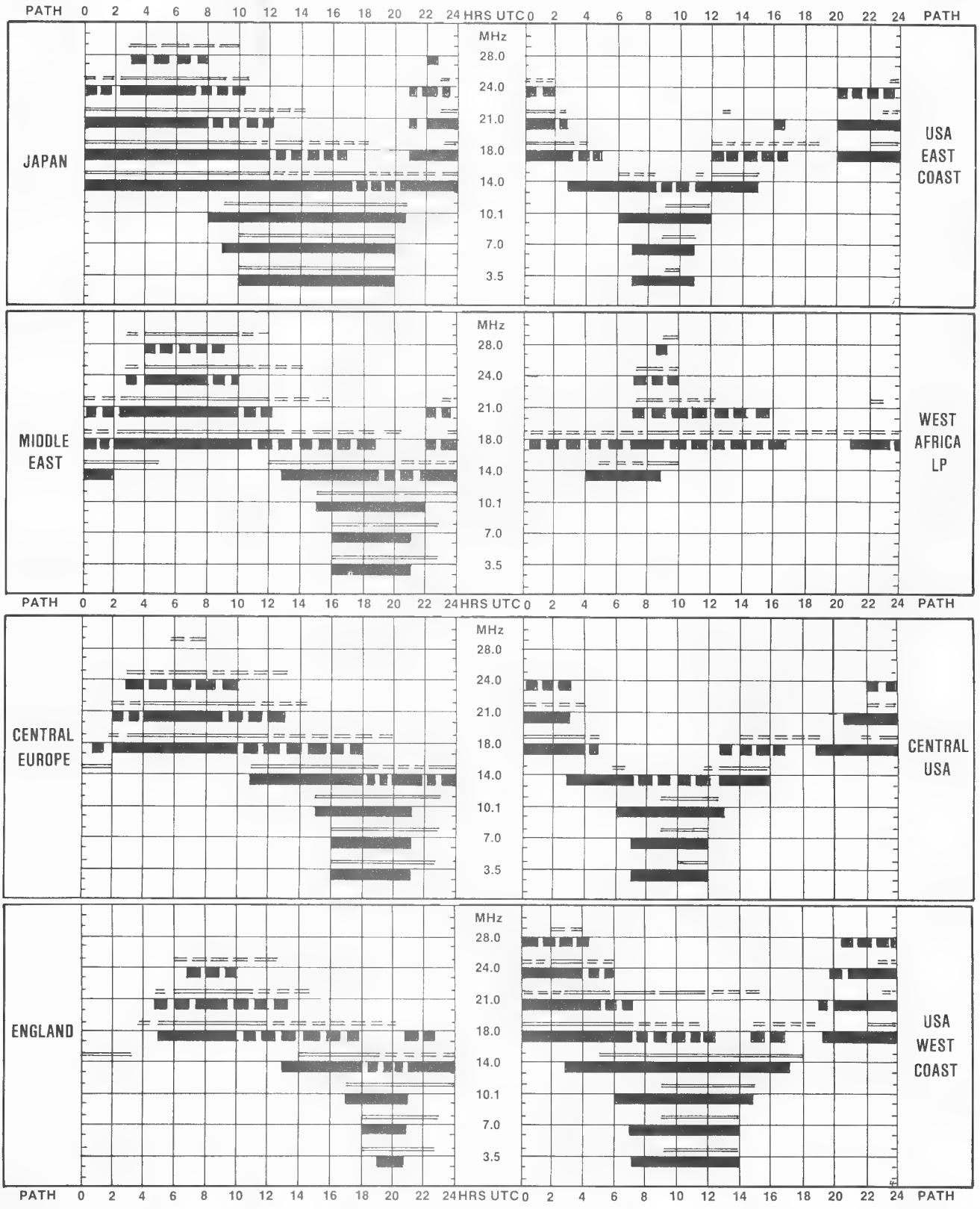
IONOSPHERIC PREDICTIONS

Len Poynter VK3BYE

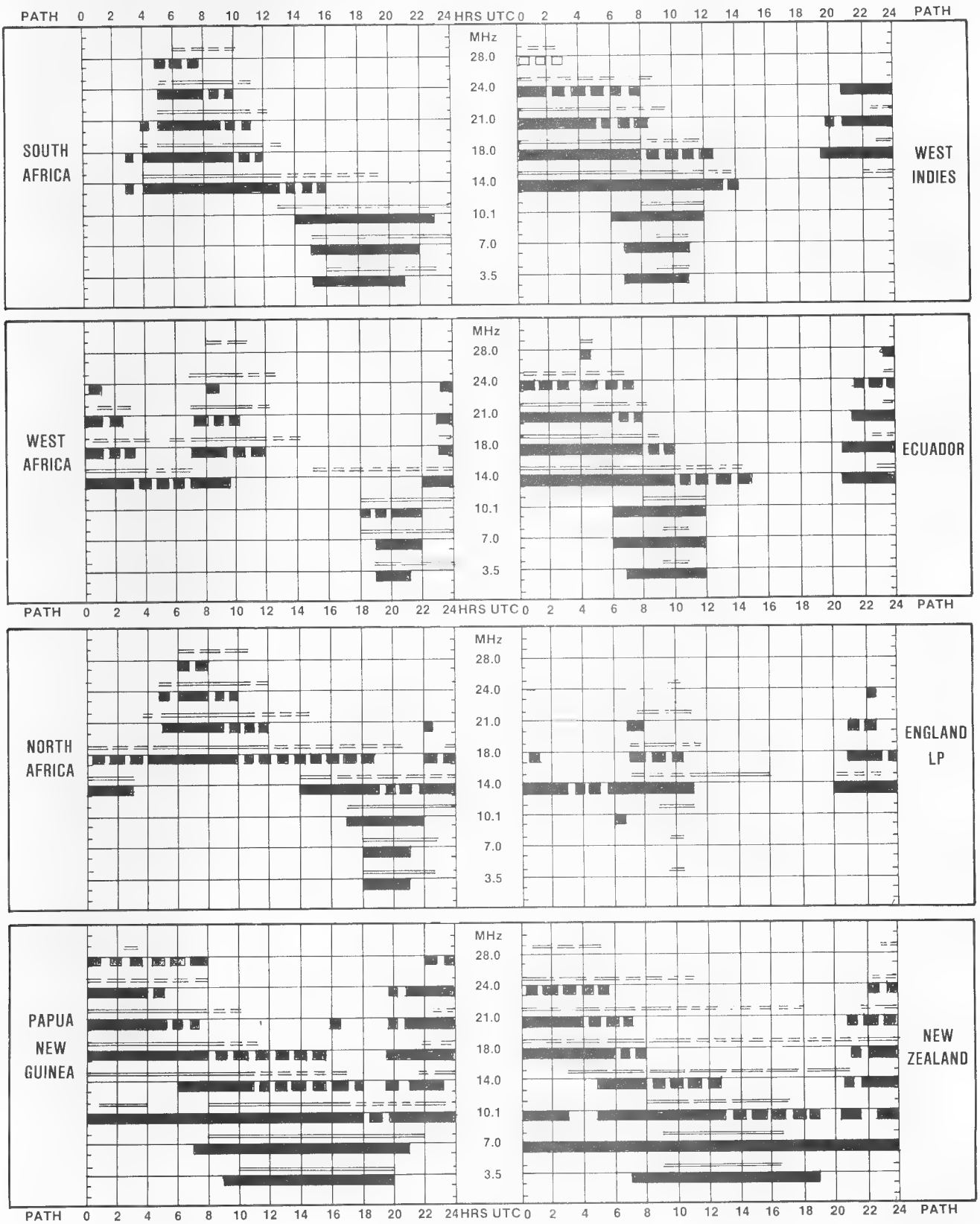


LEGEND

From West Australia

From East Australia

Better than 50% of the month, but not every day



Predictions courtesy Department of Science and Environment IPS Sydney. All times in UTC.

Less than 50% of the month

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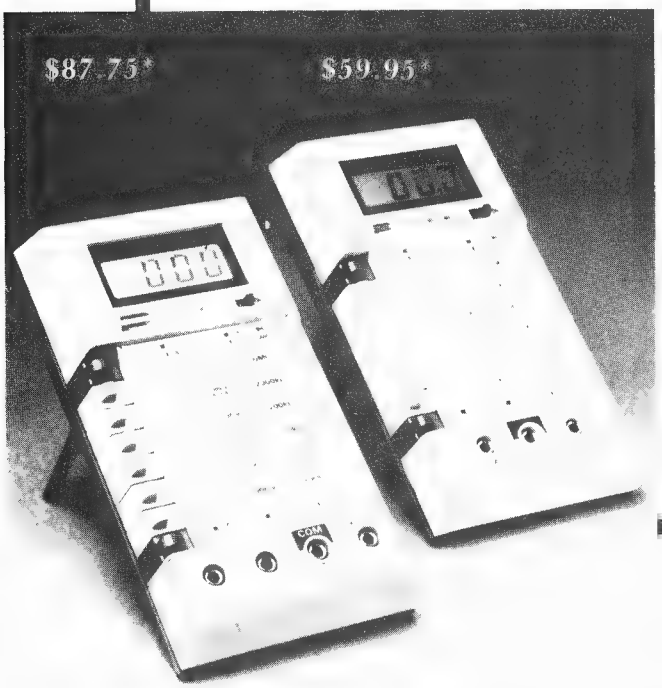

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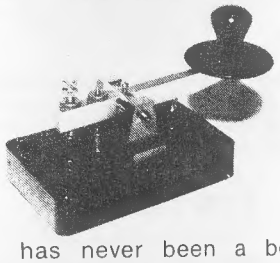

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Obituaries

GLEN ARTHUR VK4GJ

Glen Arthur became a silent key on 17th May 1983, having held the callsign VK4GJ since July 1936, licence number 4348 and after the war, since 1946.

He was the holder of a First Class Commercial Operators Certificate of Proficiency and was for many years employed as an engineer in Broadcast Stations.

Glen also had letters in music and for sometime had his own dance band which played at Brisbane's Clubland which was only recently demolished.

CW was Glen's main amateur interest although he was an ardent "home brewer", adapting disposals gear and throw-away items such as toothbrush handles etc. to his needs.

With sadness we record the passing of another "OLD TIMER".

Clive VK4CC
AR

JOHN DICKENSON VK3VKO

It is with deep regret that we announce the passing of John Dickenson, VK3VKO on 17th of June.

John became interested in the radio hobby in 1976 and acquiried his callsign in January 1980.

He was wellknown on the PNG-net and made many friends all over the world also as an active international 10/10 member.

He will be sadly missed by all who knew him. Our sincere sympathy is extended to his wife and teenage daughters.

John Hill VK3WZ
AR

FRANK BAKER

It is with deep regret we announce the passing of Frank Baker, brother of Joe, VK2BJX columnist of "Listening Around".

Condolences are extended to Joe and the family from the Cocktail Net.

CAN YOU HELP?

Alan Shawsmith, VK4SS is compiling a history of amateur radio in VK4 during the years 1930-39 inclusive, for the Queensland Division of the WIA. If any reader obtained a VK4 licence during this period, or knows someone who did, Alan would very much like to hear from you.

It is sad but true that most of the OOTs who obtained a ticket in the 1920s are now SKs — and in a few years the same will be said of those licensed in the 1930s. The Queensland Division's records are not yet complete but it would appear that already over one-half of these latter are also SKs. These are the statistics no-one can avoid.

So, help the WIA record for posterity the names, calls and details of all those who pre-war took out an amateur licence. Write to VK4SS, 35 Whynot Street, West End, Qld 4101.

AR

Stolen Equipment

ICOM 22S 2 m Transceiver and Yaesu Gutter Mount and Base stolen on 25th May, 1983.

Anyone with information about this equipment should contact the owner, John Latham, VK2KFK or North Sydney Police Station. The transceiver has a 12 pin socket on rear.

Silent Keys

It is with deep regret we record the passing of —

GLEN ARTHUR VK4GJ
JOHN REGAN VK3PEN

WARNING!!

Disposing of your old rig?? Please ensure it goes ONLY to someone licensed to use it on YOUR bands.

HAMADS

PLEASE NOTE: *If you are advertising items FOR SALE and WANTED please write on separate sheets, including ALL details, eg Name, Address, on both. Please write copy for your Hamad as clearly as possible, preferably typed.*

*** Please insert STD code with phone numbers when you advertise.**

- Eight lines free to all WIA members. $9 per 10 words minimum for non-members.
- Copy in typescript please or in block letters double spaced to PO Box 300, Caulfield South 3162.
- Repeats may be charged at full rates.
- QTHR means address is correct as set out in the WIA current Call Book.

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CB RADIOS $69: Walkie talkies, short wave radios, military, outback, business, amateur, marine, repairs, RTTY Siemens 100 A printer $120; base mic $45; ultrasonic alarm $35; all ham bands on a single 6 ft

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FREE — VIC

AVAILABLE FREE TO ANY RADIO CLUB or any amateur prepared to collect from QTH. Issues of AR 1972 to 1980. Approx 75 issues of "New Scientist" magazine 1979/80. George Cranby, VK3GI, Box 22, Woodend, 3442. Ph: (054) 27 2576.

WANTED — NSW

AUSTRALIAN RADIO SERVICE MANUALS. Also Wireless Weekly and Australasian Radio World magazines. Also pre 1940 radios and components. Brian VK2EFD, Box 131, Cooranbong, 2265. Ph: (049) 77 2178.

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EIMAC 8874. VK4WR, QTHR or ph: (071) 41 1315.

HANDBOOK AND/OR MAINT MANUAL for ICOM IC 22S. Buy or borrow for copying. VK4AAC, QTHR or ph: (07) 390 6423.

HUSTLER 5BTV, 803 or 4-400A bases and oil filled high voltage caps for linear PSU. Details to VK4SZ, QTHR or ph: (070) 61 3286.

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YAESU FT107 DMS, 10-160 m incl WARC bands, 12 mems, AC/DC, scan hand mic, AM filter fitted, instruct man. As new. $800. VK2NAU, QTHR or ph: (02) 774 2464.

FOR SALE — VIC

COLLINS 75S — 3A Rx, 14 + 14 bands, EC, Speak, manual, spare valves $400. TCA T5223 Rx, 30-1 MHz bands, 1 kHz readout, manual, spare valves, EC $300. G Himolij, 118 Wilson Road, Newcomb, Geelong, 3219. Ph: (052) 48 1410.

FT 107 m YAESU Txcvr 160-10 m with DM mem — no WARC bands. YM-38 dynamic mic — scan type, all $720. Werner Wulf 2 el 10-15 m beam $90. Chirnside vert CE-5-SS80/10 m $70. Frank, VK3ZJ, QTHR or ph: (03) 598 4711.

IC202 2 m SSB tcvr. Fitted with 4 xtals, covers 144-144.8 MHz. No mods. With h'book. $140. VK3RT, QTHR or ph: (03) 288 5611.

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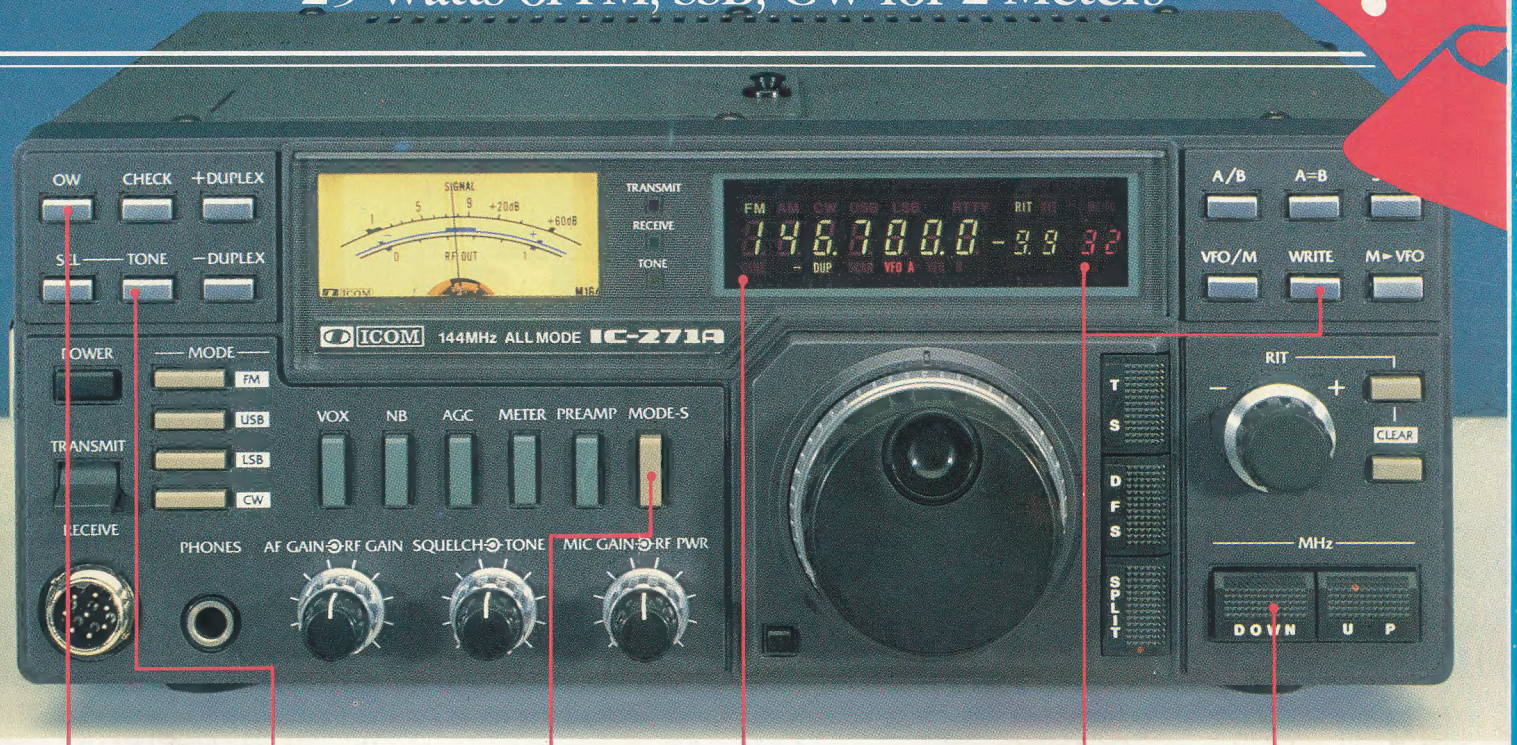
NEW!

25 Watts of FM, SSB, CW for 2 Meters



OFFSET WRITE

PL TONES BUILT IN

MODE SCAN

NEW DISPLAY

32 CHANNELS OF MEMORY

1 MHz UP/DN BUTTONS

Arriving soon — Contact ICOM for details

ICOM presents the most advanced all mode, two meter base station available today . . . the IC-271A.

25 watts of power from 12 VDC or from 240 VAC with the optional internal power supply/32 full function memories/multimodes/subaudible tones/PLL locked to 10Hz/high visibility, multi-color flourescent display/RIT readout/scanning/dual VFO's/new size.

25 watts. Now a 2 meter base station with 25 watts of power and an optional internal power supply. The IC-271A is a complete station.

32 full function memories. Each memory holds frequency, offset, offset direction, mode, and subaudible tone. Frequency, tones and offset are selected by rotating the main tuning knob.

Subaudible tones. Subaudible tones are selected by rotating the main tuning knob and may be stored into memory.

PLL locked to 10Hz. Extremely low noise and a good signal-to-noise ratio PLL allow synthesizer lock to 10Hz.

High visibility display. ICOM's new high visibility, multi-color display gives easy to read at-a-glance display of frequency, mode, offset, VFO in use, memory channel, and RIT offset direction and amount.

Scanning. The IC-271A can scan memories, programmable sections of the band, or modes. Mode-S scan is a mode scan and can be used to scan memories with a particular mode or to lock out frequencies continuously busy so that the receiver will not stop at that memory channel each time.

Dual VFOs. ICOM's dual VFO system is now even more versatile with the ability to transfer from memory to VFO. This allows frequencies from the tunable memories to transfer directly into another memory without moving a VFO to the new frequency first.

New size. Only 11¼"W x 4⅜"H x 10¾"D the IC-271A is styled to look good and engineered for ease of operation.

Other features. To make the IC-271A functional and easy to use, ICOM has incorporated many asked for features: UP/DN buttons, dial lock, switchable preamplifier, duplex check, all mode squelch, receive audio tone control, S meter, center meter, computer interface, and 7 year lithium battery memory backup.

Discover a new deal with ICOM AUSTRALIA PTY. LTD.

7 DUKE STREET WINDSOR 3181
VICTORIA, AUSTRALIA
TEL: (03) 529 7582 TLX: AA 35521 ICOMAS

ICOM
The World System

WARNING: When purchasing an ICOM unit, please confirm that you are dealing with an **Authorised ICOM Dealer**, as the ICOM Warranty applies **only** to units supplied by ICOM Australia Pty. Ltd., to Authorised ICOM Dealers.

Adg. ICM 530

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